# the American Perfumer and ESSENTIAL OIL REVIEW

*COSMETICS · SOAPS · FLAVORS*

EST. 1906

HARLAND J. WRIGHT, Editor and Publisher

ROBIN FOWLER
Managing Editor

MAISON G. deNAVARRE, PH.C., B.S.
Technical Editor

WILLIAM LAMBERT
Business Manager


## CONTENTS · JULY 1944


The Stabilization of Aldehydes
*A. T. Fiore and Edward Sagarin* ... 33
The Future of Industrial Alcohol
*Milton F. Martin* ... 36
Development of Latin American Essential Oil Industry
*Dr. Ernest Guenther* ... 37
Helena Rubinstein Adds to South American Establishments ... 38
Short Adages
*R. O'Mattick* ... 39
Important Report on Post-War Reconstruction
*Our British Correspondent* ... 40
The Gossiping Guide to the News
*Raymond W. Lyman* ... 43
World-Wide Survey of Oil of Lavender
*Dr. Ernest Guenther* ... 46
Technical Abstracts from Technical Literature ... 49
Packaging Portfolio ... 50
Recent Cosmetic Developments and Their Post-War Significance
*Maison G. de Navarre* ... 52
Manufacture and Sale of Perfumes and Cosmetics in North Africa
*Michel Raineau* ... 57
Survey Relating to the Purchase of Soap ... 65
Oil of Peppermint—
Storage Factors and Use of Antioxidants As Preservatives
*L. H. Baldinger, N. K. Ellis and K. I. Fawcett* ... 69

**REGULAR FEATURES**

Desiderata—*Maison G. deNavarre* ... 29
Chemists Pay Basis — Alcohol
Canadian Toilet Goods Convention — Pancake Machine
Cream or Milky Foaming Shampoo — Lanolin
Acid Stable Emulsifier
Questions and Answers ... 31
Washington Panorama ... 75
War Check List ... 79
News and Events ... 83
New Products, Ideas and Processes ... 87
Trade Jottings ... 89
Here and There Among Our Friends ... 93
New York Market Report ... 95
Prices in the New York Market ... 97
PRODUCTION CONTROL AND ANALYSIS OF COSMETICS
Chapter IV (con't) Physical and Chemical Testing
Gravimetric and Volumetric Methods ... 103



*Published by* ROBBINS PUBLISHING COMPANY, INC.

J. H. MOORE, *President* — F. C. KENDALL, *Treasurer*

Publication Offices: 56th and Chestnut Streets, Philadelphia 39, Pa. U.S.A. Editorial and Executive Offices: 9 East 38th Street, New York 16. Telephone: CAledonia 5-9770; Cables: Robinpub, New York; Codes ABC 5th Edition. NED BRYDONE-JACK, *Pacific Coast Representative*, 714 West Olympic Blvd., Los Angeles 15, Calif. Subscription rates: U.S.A. and possessions $3.00 one year; 30c per copy. Canada and foreign $4.00 one year. Volume Forty-six; Number seven.



*(Copyright 1944, Robbins Publishing Company, Inc.)*


# Editorial Comment

### The importance of making post-war plans now

IN Great Britain the wheels have been turning for some time now in setting up a framework within which her export business will function smoothly when the war is ended. In fact, the plan is such a one as to permit limited resumption of operation in territories liberated from the enemy before the end of general hostilities. It is to be pointed out that meetings held so far are for the purpose of recommendation only, but the fact remains that the plans are set, or are in process of being set, for efficient operation. England feels that in order to place her trade in a position to enjoy world-wide acceptance, she must be there first, with the best possible merchandise, and she does not propose to be caught flat-footed.

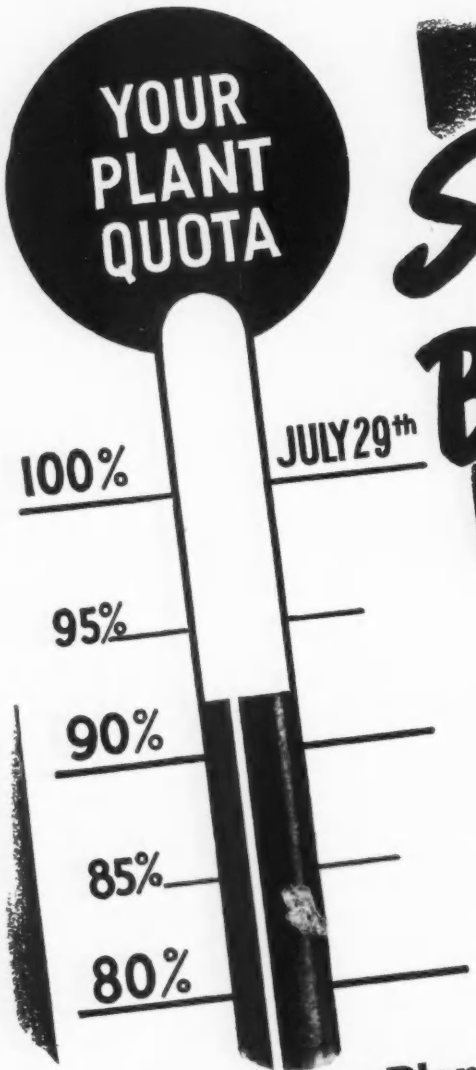
Her committees have even arrived at the point where there is a feeling that in certain instances steps should be taken in the case of certain firms to insure their sound financial position for retooling, new plant, etc.

It is pertinent to note that Great Britain does not expect that all of the export business which she is now doing to revert to those nations who formerly supplied the demand, and are now unable to do so.

Through some restrictions that have been imposed upon England by lend-lease—for one thing—the United States has been enjoying preferential treatment in some territories. Our merchandise, our machinery, our "know how" has been accepted as being among the best. The need expressed by North Africa for our equipment and technicians, our large sale of basic staples in the South American markets, are cases to point up our current position.

But with peace we will face not only competition from England abroad. France will make an effort to regain her strong position in world-wide trade, and most certainly Germany will be in there slugging.

We have heard repeated warnings of fierce competition to come, and have passed these warnings along. Now is the time to mend our fences.




# Stay at Your Battle Stations!

## MANAGEMENT • LABOR

—the 5th War Loan Drive is still on.

July 29th is the last pay day in the Drive.

The U. S. Treasury has set the overall goal at $16,000,000,000 —$6,000,000,000 from individuals alone. This is the biggest sum ever asked of the American people—*and it must be raised!*

Keep fighting. The 5th War Loan is a crucial home front battle of tremendous importance to the total war effort.

Tighten up your 5th War Loan Drive organization. Step up your solicitation tempo. Drive! Drive!! Drive!!! Hit your Plant Quota's 100% mark with a bang that'll proclaim to all the world that the U. S. Home Front is solidly in back of the Fighting Front.

Need help? Need ideas? Call on the Chairman of your War Finance Committee. He's standing by.

## Here's the Quota Plan:

1. Plant quotas are to be established on the basis of an *average* $100 *cash* (not maturity value) purchase per employee.
2. Regular Payroll Savings deductions made during the drive accounting period will be credited toward the plant quota.
3. Employees are expected to contribute toward raising the cash quota by buying extra 5th War Loan Bonds: 1—Outright by cash. 2—By extra installment deductions. 3—By extra installment deductions plus cash.

*Example:* JOHN DOE MFG. CO.—1,000 Employees

1,000 Employees x $100 . . . $100,000 Cash Quota

Regular payroll deductions during the eight weekly payroll accounting periods of June and July. 30,000

$70,000 (to be raised by sales of extra Bonds).

**BACK THE ATTACK—SELL MORE THAN BEFORE**

*The Treasury Department acknowledges with appreciation the publication of this message by*

ROURE-DUPONT, INC.

Sole Agents for Roure-Bertrand, Fils & Justin Dupont, Grasse, France—Essential Oils and Aromatic Chemicals
366 Madison Ave., New York, N. Y. • Chicago • Los Angeles

★ ★ *This is an official U. S. Treasury advertisement—prepared under the auspices of Treasury Department and War Advertising Council.* ★ ★

# desiderata

*Comment on interesting new chemical developments and their application to cosmetics and toiletries*

by MAISON G. DENAVARRE

M. G. DeNavarre at work in his laboratory

### CHEMISTS PAY BASIS

A group of Detroit chemists has done a darn swell job of attempting to raise the general status of chemists in its area. After all the dirty work was done, they make the specific recommendation that all beginning chemists should get the following monthly pay based on a 40 hour week: chemists with a B.S. degree, $225; chemists with a M.S. degree, $250; and chemists with a Ph.D. degree should get $300 per month respectively. This is *base* pay. It is also pay for *beginning* chemists only. Men working longer, should get more money. Thus after 10 years, the base pay for chemists doing routine work should be at least $3,500 per year. Research chemists pay should be on an open basis, the rate of pay depending on ability and contribution of the chemist to the company welfare.

These are reasonable demands and should be met by every manufacturer around the country, whether he be in the cosmetic business or making guns or tanks. If the chemist has sufficient professional standing to do a chemist's job, then he should be paid a professional rate of pay. Certainly the amounts designated above are reasonable. The chemist will be the last man in the company to ever be unionized. Give him his due and you will be repaid a thousand fold.

### CANADIAN TOILET GOODS CONVENTION

The general reality that pervaded the Convention in Quebec is something worthy of admiration. They won't get caught with stockpiles of materials on hand in a possible declining market at armistice. Every conceivable restriction is now being removed, so that when and as materials do become more freely available, they can be quickly absorbed by the industry. No sudden flooding resulting from large stockpiles like in the case of certain commodities. The Canadians seem to have a way of *easing off* which we haven't yet learned. We might take a few lessons from them. A lot of the Americans who were there were pleasantly surprised. Both officers and members know what they want and go after it.

### CREAM OR MILKY FOAMING SHAMPOO

Considerable interest has been shown in the fluid, creamy or milky shampoos that have appeared on the market. It is especially interesting if it works in hard and soft water, rinsing cleanly from the hair leaving no insoluble hard water soaps on the hair. Also desirable would be a voluminous foam. Of course the product should be reasonably cheap.

Well, there is such a proprietary blend available today. It is creamy in appearance, can be diluted for use, foams to beat the band and is reasonably priced. I have made a fifty-fifty dilution of the material with tap water and used it as is for a shampoo. It gave me a pleasant surprise. The hair felt soft after rinsing too. It had a nice sheen. Didn't seem to dry the scalp as much as some other foaming soapless shampoos.

In use, the maker says that the heavy concentrate is most easily diluted with hot water, although cold water may be used too. Permutit, deionized or distilled water are to be preferred, but water of medium hardness can be used right from the tap. Personally, I would recommend the treated water for all round safety.

### PANCAKE MACHINE

There is a small builder of specialized equipment who has developed a compressing machine for the manufacture of so-called "pancake" makeup. It requires pre-forming of the cake as do all other methods, but compression is achieved by means of a piston producing what is called progressive compression. One girl can turn out about a dozen cakes a minute. If two girls set the machine, the production is increased to between 15 and 20 cakes a minute. Two or three of the machines can get out quite a bit of production. The maker states that the machine is guaranteed in every way. It is sturdy and has but one or two parts that might wear in a couple of years. Delivery in about 60 days.

It can be used to make rouge as well as *pancake*. To make rouge, the machine will have about four times the production it has in making pancake. The machine is excellently adapted to making laboratory runs for development purposes and is priced low enough to be within reach of any sized manufacturer, namely at $350 delivered. The unit stands about 4 feet high, is about 3 feet by 2 feet in surface area.

### ACID STABLE EMULSIFIER

Interest in acid stable emulsifiers continues in unabated pace. Another new one is announced, with maybe one or two more in the offing. As you know, it takes an acid stable

# Meet the Reason Why Some Shipments are Late!

MAY we present one of a whole family of governmental ointments packed in SHEFFALLOY (Sheffield Process) Tubes. Tough Sheffalloy Metal is ideally suited to the manufacture of "G.I." tubes. That's why they are being specified in very large quantities for shipments to all parts of the world.

Naturally, these orders carry the highest preference ratings. Rigid production schedules and shipping dates must be met! Supplies for our wounded simply can't wait. Here, then, is the reason why some civilian shipments are late. If occasionally your SHEFFALLOY Tubes are a longer time coming, please bear with us. We're doing our utmost to efficiently serve every one of our customers. Their good will is our most valuable asset!

Sheffalloy TRADE MARK REGISTERED
SHEFFIELD PROCESS TUBES

**NEW ENGLAND COLLAPSIBLE TUBE CO.**

3132 S. CANAL STREET, CHICAGO 16 • NEW LONDON, CONN. • W. K. SHEFFIELD, 500 FIFTH AVENUE, NEW YORK 18
THE WILCO COMPANY, 6800 McKINLEY AVE., LOS ANGELES 1

emulsifier to do what you want in the case of antiperspirant creams. To get a smooth rich cream that is easily applied is the hope of all. To get one that gives these properties as well as ease of manufacture is almost impossible. This new emulsifier embodies both features.

**LANOLIN**

From present indications, you probably won't be getting any more lanolin during the remainder of the year than you are now getting if things continue to run as they are. If matters get worse, so will the availability of lanolin. The best thing to do then is to practice a *stretching* program continuously for at least the balance of this year.

**ALCOHOL**

Doesn't look any better for alcohol for a while anyway. That is my guess. The liquor boys will probably get first call in an attempt to stave-off bootlegging . . . a very practical consideration. We all remember the dreaded prohibition era. If a little alcohol given to the liquor people will prevent the evil of bootlegging, I'm for it, even though it hurts to admit it.

In talking to the alcohol administrator, who has a national reputation of being a tough *hombre*, I, too, found him tough. But like everyone else knows, he is also a just and fair administrator. His job is thankless and difficult. But he is doing it the best way he can.

# Questions and Answers

**506 BINDING AGENTS**

Q: *Please advise us as to what, in your opinion, would be the most satisfactory binding agent to use in a product similar to bath tablets. One of our products, which has exceptional water softening properties, is in powder form, and we are considering putting it up in tablet form, and hence our interest in a binder that is quickly soluble in water and preferably of the effervescent type. Also, do you know of any manufacturers in the Metropolitan area who make tablets of this type for the trade? We thank you very much for any help that you can give us.*

N. J.—ILLINOIS

A: You will be wise to forget the effervescent idea unless you are prepared to employ an expert manufacturer of effervescent tablets or/and to build and equip a plant that will retain an atmosphere of absolute dryness throughout the manufacturing line. Ordinarily, a product such as yours can be compressed into tablet form simply by wetting with a small amount of water-alcohol mixture and passing the pasty mass through a coarse sieve, then drying. The dried granules are then sifted to uniform size and compressed into tablets. You should not need any other type of binder, although if you choose, a dilute solution of gum acacia or of methyl cellulose will be satisfactory, providing your ingredients are incompatible with these binders.

**507 LANOLIN EXTENDERS**

Q: *Can you give me any data relative to para-aminobenzoic acid as a sun screen? Also the name of the lanolin extender and any data on Hobart Mixers?*

E. B.—ILLINOIS

A: The names of the suppliers of lanolin extenders are sent to you under separate cover. Para-aminobenzoic acid as such is not used in sun screens, but its esters, such as the ethyl, propyl or isobutyl derivatives are effective in sun screens in concentrations of one-half to one and one-half per cent. These products discolor in alkaline media and in the presence of iron. They are soluble in strong alcoholic solutions or in fats.

**508 PROTECT HAIR FROM SUN**

Q: *We would like to have a formula similar to Ogilvie Sisters' Protecsun, a preparation which protects hair from fading and drying in the sun.*

U. S.—TEXAS

A: We have had many enquiries from you in recent weeks, and would suggest that you buy some standard text on cosmetics which we are sure will be of great help to you. We suggest Poucher's three volumes on Soap, Perfumery and Cosmetics, Chilson's Modern Cosmetics or deNavarre's The Chemistry and Manufacture of Cosmetics. Regarding the Protecsun, we are naturally unable to give you this even if we knew it because it is not the policy of THE AMERICAN PERFUMER to give formulas that duplicate well-known products on the market. It is our belief that a preparation containing fats or oils that have been found suitable in hair preparations can be used and that if hair is to be protected from the sun, it is not unusual to add to it a desirable percentage of sun screen. There are many trade-named sun screens on the market, and you will find these advertised in THE AMERICAN PERFUMER or mentioned in the *Sun Tan Bulletin*, published by THE AMERICAN PERFUMER.

**509 ANTISEPTIC LOTIONS**

Q: *I have ordered deNavarre's book*, The Chemistry and Manufacture of Cosmetics, *which I saw advertised in* THE AMERICAN PERFUMER, *but in the list of products described in the advertisement of the book, I do not find mentioned any antiseptic lotions. May I ask you to be kind enough to let me have a good working formula and also a formula for the English Bryl Cream Hair Dressing.*

W. M.—SOUTH AFRICA

A: There are no formulations in the book you mention for antiseptic lotions. The composition of such lotions will vary, depending upon the effect they are to produce. Products used for the various conditions you mention in your letter invariably consist of saponaceous solutions of cresols, such as the Official Liquor Cresolis Saponatus, commonly known as Compound Solution of Cresol, U.S.P. This consists of 500 cc of cresol, a vegetable oil, such as cottonseed oil 350 cc, alcohol 55 cc, potassium hydroxide 72.6 cc, distilled water, enough to make 1000 cc. The vegetable oil and alcohol are mixed. The alkali is dissolved in water and brought to a boil. This is added to the fats and stirring is continued until a small portion of the soap dissolves in hot distilled water to form a clear solution. Add the cresol to the soap and mix in. Make up to volume. Regarding the British hair dressing mentioned above, we are not acquainted with this composition, but suggest that you take the formula and directions given to the enquirer.

R. A.—CALIFORNIA

*the heart of your cosmetic is correct perfuming*

ALLURE THAT IS ENHANCED AND MADE
IRRESISTIBLE BY THE SUPERLATIVE FRAGRANCES THAT
BEAR THE FELTON STAMP OF QUALITY

**Felton** CHEMICAL COMPANY, INC.

599 JOHNSON AVE., BROOKLYN, N. Y.

Manufacturers of Aromatic Chemicals, Perfumes and Essential Oils

BRANCHES IN PRINCIPAL CITIES

# The Stabilization of Aldehydes

*A study of aldehyde anti-oxidants . . . The history of research in this field . . . Patents . . . Phenols and amines prove to be most potent inhibitors*

by A. T. FIORE and EDWARD SAGARIN
*Givaudan-Delawanna, Inc.*

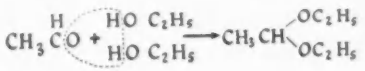
AMONG the various classes of organic compounds used by the perfume chemist, the aldehydes occupy a unique position. On the one hand, many of these compounds are amongst the most interesting in the entire realm of chemistry from an odor point of view, while on the other hand the instability of the aldehydes is an ever-present problem, differing with the nature of the aldehyde, and the manner of its use.

The aldehydes are a particularly reactive class of chemicals; they oxidize quite easily, sometimes simply in the presence of air; they are reduced to the alcohol without great difficulty; many aldehydes polymerize and in the presence of strong bases give aldehyde resins; they react with themselves, with other aldehydes, ketones and a variety of esters to give aldol condensation products; with some alcohols they form acetals and hemi-acetals. These are but a few of the classic reactions in which these compounds participate.

It can generally be predicted that compounds that are extremely reactive are also unstable, and while this is true of the aldehyde, its instability is primarily attributable to the tendency to be oxidized. The aldehyde, in fact, is an in-between stage in the oxidation of an organic compound; it has reached a higher stage of oxidation than the alcohol, but has been stopped before it has reached the more stable stage of the acid. So unstable can this aldehyde stage be that even the air may cause oxidation to continue.

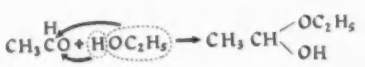
For the perfumer, the tendency of the aldehyde to be oxidized to the acid is particularly objectionable, because the odor value of his finished composition is changed thereby.

An effective approach to this subject has been the stabilization of the aldehydes by the formation of acetals. In this reaction, one molecule of an aldehyde reacts with two molecules of an alcohol:



The resultant compound may be considered a di-ether, and is characterized by the presence of two alkoxy groups. Unlike the aldehyde from which it is formed, the acetal is particularly stable.

A very careful treatment of equimolecular quantities of an aldehyde and alcohol (that is, one molecule of each), can form what is known as a hemi-acetal. This reaction can be characterized as follows:



but this compound is generally unstable, because of the presence on one carbon atom of OH and $OC_2H_5$, a combination which lends itself to the regeneration of the alcohol and aldehyde.

### SUBJECT OF MUCH RESEARCH

During the First World War, the problem of the stabilization of aldehydes became the subject of some monumental chemical research by two French chemists, Moureu and Dufraisse, whose work is summarized by K. C. Bailey[1] in his book, "The Retardation of Chemical Reactions." The French were particularly interested in the possibilities of using acrolein, an unsaturated aldehyde, as a war gas. Acrolein has the formula: $CH_2{=}CH{-}CHO$, and by itself is so unstable that its manufacture, storage and use was practically impossible.

Moureu and Dufraisse conducted more than 100,000 different experiments on oxygen absorption, studying over five hundred different substances. They found that polyhydric phenols, particularly with the hydroxyl groups in ortho and para positions, were effective anti-oxidants for the aldehydes, and found that "one part of hydroquinone in ten thousand maintained the acrolein perfectly clear and unaltered."

In addition to acrolein, they examined large numbers of other substances, including benzaldehyde, acetaldehyde, chloral, propyl aldehyde, anisic aldehyde, cinnamic and hydrocinnamic aldehydes. As anti-oxidants, they tested the effect of other aldehydes (vanillin, salicylic aldehyde), phenols, acids, etc. Among the nitrogen containing organic compounds, they found that secondary amines, di-amines and amino phenols were very effective.

In addition to the exhaustive studies of Moureu and Dufraisse, and the excellent summary of this work by Bailey, we may cite a few further studies and patents on aldehyde stabilization.

T. A. Boyd,[2] in a paper entitled, "The Relative Effects of Some Nitrogen Compounds upon Detonation in Engines," shows that several aromatic amines (triphenylamine, aniline and diphenylamine) exhibit an order of activity as stabilizers for benzaldehyde identical with their or-

**Vacuum still for recovery of citronellal from citronella**

der of activity as anti-detonants.

Kothari and Watson,[3] whose work may be said to continue and largely substantiate that of Moureu and Dufraisse, found among other inhibitors for benzaldehyde oxidation, hydroquinone and its mono-methyl ether, catechol, resorcinol and pyrogallol; in other words—polyhydric phenols.

### FIRST PATENT AWARDED IN 1930

In 1930, Eric C. Kunz[4] of Givaudan-Delawanna, Inc., was awarded U. S. Patent 1,757,967, with the claims that "aldehydes and aldehyde containing compounds are stabilized by adding an hydroxycarboxylic acid thereto." The inventor mentions as examples of such acids, which can be added as such or in the form of their esters, tartaric, citric, tannic and malic. He showed that phenylacetaldehyde, for example, when treated with a trace of tartaric acid, will lose less than five per cent of its aldehyde content over a period of several weeks, and when the sample is left untreated, though in a dark colored bottle and well stoppered, it will lose as high as fifty per cent of the aldehyde content. About 0.01 per cent of the acid is mentioned as an effective stabilizer. It should be pointed out that the problem of the stabilization of phenyl acetaldehyde is largely that of retarding polymerization rather than oxidation.

About three years later, P. J. Leaper[5] obtained U. S. Patent 2,001,788, assigned to U. S. Rubber Company. The patent claims that amyl cinnamic aldehyde can be stabilized by adding a small amount of diphenylamine.

A third patent in this field, assigned to E. I. duPont, was obtained by W. C. Meuly[6] (2,184,526). A claim is made for a stabilized cyclamen aldehyde, by the formation of hemi-acetal with one of a group of terpene or aromatic alcohols. Mentioned as stabilizers in this patent are the corresponding cyclamen alcohol, benzyl alcohol, citronellol, phenyl ethyl alcohol, cinnamic alcohol, and so on.

### EFFECT OF STABILIZATION

A considerable amount of study has been conducted on the use of stabilizers to inhibit the oxidation of hydroxy citronellal. This aldehyde is known for its valuable lily of the valley fragrance, and it has long been the object of the perfumer to find a method of stabilizing it without affecting its odor. A remarkably effective method for the stabilization of this aldehyde is by its mixture with the corresponding alcohol, hydroxycitronellol. The mixture is particularly valuable because the percentages of each of the two compounds is variable, without affecting the odor. This method of stabilization is covered by U. S. Patent 2,265,437, issued on December 9, 1941, to M. Luthy[7] and A. T. Fiore of Givaudan-Delawanna, Inc.

The velocity of oxidation of various aldehydes, the effect of light on this oxidation, and the stabilizing effect of other aldehydes, alcohols and various organic compounds, were the subject of investigations by M. T. Bogert, in collaboration with Davidson[8] and with McDonough.[9] Included in the Bogert and Davidson studies were aldehydes C-7, C-8, C-10, C-11, citral, benzaldehyde, p-toluic aldehyde, para-anisic aldehyde, piperonal, salicylic aldehyde, vanillin, ethyl vanillin, cinnamic and amyl cinnamic aldehydes.

Bogert and Davidson studied the number of cc. of moist oxygen (at 22° or at 100°, as the case may be), absorbed per minute by four cc. of the aldehyde, when the latter, after very careful purification, was agitated in an atmosphere of oxygen. The results for oxidation in the dark, as reported by these authors, is shown in Table 1. "In addition to the work with the individual aldehydes," Bogert and Davidson write, "mixtures of two different aldehydes were tested, to see in what way the oxidation velocities of the two would be affected, and some rather surprising results were obtained, which indicate the possibility of so blending odorous aldehydes as to reduce the oxidation velocities of the more sensitive ones. On the other hand, it is equally important for the practiced perfumer to know that he may so select his aldehydes as to get exactly the opposite effect and unwittingly compound a mixture which will oxidize more rapidly than any of its components separately."

To summarize a few salient and outstanding facts in the findings of Bogert and Davidson, it may be said that amyl cinnamic aldehyde increased the oxidation of benzaldehyde by about six and a half times; cinnimac aldehyde likewise caused a slight increase, while p-anisic aldehyde, piperonal, salicylic aldehyde, citral and aldehyde C-7 all diminished the oxidation rate, in the order of effectiveness mentioned.

Likewise inhibiting the oxidation of benzaldehyde were benzyl alcohol, ethyl alcohol, and the two propyl alcohols.

Bogert and McDonough analyzed the theoretical explanations of the chemical action of certain compounds that prevent oxidation, and contributed to the store of information on this subject. They found that the "amino group exerts the most potent inhibiting action, followed by the hydroxy compounds, the phenols being more active than the alcohols."

Commenting on their results, Bogert and Davidson state that "diphenylamine is the most powerful inhibitor of those tested," but unless present in sufficient quantity to prevent oxygen absorption, "it will color the solution a deep purplish pink."

These authors point out the difficulty of predicting the instability of an aldehyde by its molecular structure. The hydroxyl group, they state, is believed to have a retarding effect on auto-oxidation, as witnessed by salicyl aldehyde, a very stable compound, yet hydroxycitronellal is less stable than citronellal itself.

Of the aldehydes tested, heptaldehyde showed the highest rate of auto-oxidation in diffused daylight. Others oxidizing at a dangerously rapid pace were benzaldehyde, amyl cinnamic aldehyde, cinnamic aldehyde and para-toluic aldehyde.

"Benzaldehyde's oxidation velocity was increased slightly by heptalde-

hyde and the only aldehyde to increase it markedly was amyl cinnamic aldehyde. The addition of any other aldehyde decreased it."

Or take a perfume compound in which amyl cinnamic aldehyde is to be blended with other aromatic materials. Bogert and McDonough tell us that cinnamic aldehyde caused even greater instability in its homologue under discussion, but phenyl acetaldehyde slowed up the rate of oxidation, while vanillin or salicyl aldehyde checked it entirely.

On studying the effect of the addition of other organic chemicals to aldehydes, Bogert and McDonough came to the conclusion that the "anilines and amines were the most potent inhibitors." Among the compounds in this class mentioned were aniline and several of its N-alkyl substituted derivatives, diphenylamine, p-amino phenol, the ethanolamines, etc. "Next in inhibiting power (after the amines) were the alcohols and phenols."

TABLE I

(See Note Below)

| ALDEHYDE | Dark Oxidation Rate (cc. of Oxygen absorbed per minute by 4 cc. of aldehyde) AT 22° | AT 100° |
|---|---|---|
| Amyl cinnamic aldehyde | 5.4 | .. |
| Cinnamic aldehyde | 2.2 | .. |
| C-8 | 2.0 | .. |
| Benzaldehyde | 1.6 | .. |
| C-7 (Heptaldehyde) | 1.1 | .. |
| Citral | 0.35 | .. |
| C-10 | 0.014 | .. |
| C-11 | 0.007 | .. |
| Anisic aldehyde | 0.000 | 4.0 |
| Piperonal | .. | 2.0 |
| Vanillin | .. | 0.12 |
| Ethyl vanillin | .. | 0.10 |
| Salicyl aldehyde | .. | 0.000 |

Note: This table by Bogert and Davidson, American Perfumer, Dec., 1929, page 588.

BIBLIOGRAPHY


1. K. C. Bailey. The Retardation of Chemical Reactions. New York. 1937.
2. T. A. Boyd, Ind. Eng. Chem., 1924, 16, 893-5.
3. C. J. Kothari and H. E. Watson. J. Indian Inst. Sci., 1931, 14A, 11-30.
4. Eric C. Kunz, U.S.P. 1,757,967.
5. P. J. Leaper, U.S.P. 2,001,788.
6. W. C. Meuly, U.S.P. 2,184,526.
7. M. Luthy and A. T. Fiore, U.S.P. 2,265,437.
8. M. T. Bogert and D. Davidson, American Perfumer, Dec. 1929, 587-88, and Jan. 1930, 667-68.
9. M. T. Bogert and E. G. McDonough, Drug & Cosmetic Industry, Apr. 1933, 312, 332-38, and June 1933, 513, 533-40.


(Editor's Note: This article will be continued in an early issue.)

---

**The successful man is the one who swims against the stream, not the one who floats with it.**—*Howard S. Neiman.*

# Canadian T.G.A. Convention

THE sixteenth annual convention of the Toilet Goods Manufacturers' Association of Canada was held at the Chateau Frontenac, Quebec, on June 12 and 13.

For those members, and guests, who took the boat from Toronto the occasion began not too auspiciously when they were held up by fog, and eventually forced to go to Montreal by bus. Another group of members awaited them in Montreal on another boat, and upon their arrival the consolidated forces sailed at about 10 o'clock in the evening for Quebec, where they arrived the following morning.

Guests from the United States came from as far distant as California, and included such outstanding representatives of the industry as: C. O. Allen, A. F. Anderson, Naugatuck Aromatics; E. C. Barton, A. S. and Mrs. Bedell, Beauty Counselors; David Bennett, Albert Verley & Co.; Norman and Mrs. Dahl, Matchabelli, Inc.; Earl and Mrs. Freese, Martha

Luncheon Group

Matilda Harper; Dr. Victor Fourman, Syntomatic Corp.; Dr. and Mrs. A. M. Hansen, House of Hollywood; Miss Janete McCrea, Belcano Co.; A. E. Mullen, Allied Products; Harry and Mrs. Lehman, Wildroot Co.; Maison G. de Navarre, Consulting Chemist; Harry E. Pfaltz, Mary Carr Rowden, Belcano Co.; Robert and Mrs. Schwartz, Wildroot Co.; Ed Strobl, Albert Verley; Warren and Mrs. van Kirk, Martha Matilda Harper; and Northam Warren, Northam Warren Corp.

Among the speakers were: The Honorable Henri Grouix, Maison G. de Navarre and J. P. Napier.

The trip to Quebec afforded the visitors a chance to see some of the historic landmarks for which the city is so justly famous. On the afternoon of the 13th, a sight-seeing trip was organized to enable one-half of the delegates to visit the famous St. Anns de Beaupre, while the other half went by electric train to the Montmorency Falls, and later were guests at the Kent House, former home of Queen Victoria's father, for tea. All details had been arranged to run smoothly by a convention committee. Many visited the old City.

Harry Garlick became president of the executive committee of the Association. The other officers elected were F. Crowhurst of Toronto and Frank Belanger of Montreal, vice-presidents; Walter Brown of Montreal, treasurer, and Arthur Laverty of Montreal, secretary.

In the election of officers H. S. Garlick, of Wildroot Co., was succeeded by R. F. Merkley of Northam Warren Co., as president.

As has been its practice in preceding years Fritzsche Brothers of Canada presented a golf trophy in the form of a Sterling Silver Rose Bowl.

This convention enjoyed the best attendance ever recorded by The Toilet Goods Manufacturers' Association of Canada.

---

**Cosmetic Creams — Deodorant.** U. S. pat. 2,294,140, Aug. 25, 1942.—A deodorant is used with an oil phase, an aqueous phase and an emulsifier comprising a hexide monoester of a fatty acid with at least six carbon atoms, such as a reaction product of mannitol and oleic acid. Numerous examples are given in the patent.

**Cosmetic Materials—Recent Advances in. I. Emulsifying Agents: Toilet Creams, Hair Creams, Soapless Shampoos, Hand Jellies, etc. II. Fat and Wax Bases: Cosmetic Colorings: Lipsticks, Rouges, Face Powders.** C. B. Holliday. *Perfumery Essent. Oil Record*, **34** (*1943*), *111, 123.*—The first of this series of articles dealt with the modern trend in emulsifying agents and it has been mainly in this direction that advances in cosmetic materials have been made. The problem facing the cosmetic chemist when dealing with lipsticks and rouges is a different one, and consists chiefly in finding the most suitable pigments and suitable bases for the incorporation of these pigments. (Through *J. A. Ph. A.* **33**, *34, 1944.*)

# The Future of Industrial Alcohol

*Synthetic rubber program greatest consumer of alcohol . . . Military and civilian requirements climbing steadily . . . Greater demand expected after the war*

by MILTON F. MARTIN
*U. S. Industrial Chemicals, Inc.*

DURING the depression of 1930, the output of alcohol dropped to about 59 million gallons in 1933 and did not climb to 100 million gallons until 1936. From this time on, its production increased steadily, reaching its peak in 1941, which was 156 million gallons.

The industry is charged with a heavy wartime role. Until the beverage distilleries were called in to assist the regular industry, alcohol producers met the early war needs for this chemical.

The first military demand came from the smokeless powder plants. Other military needs came from Chemical Warfare Service—from the Navy for the propelling of torpedoes—from the medical branches of the Service—Lend-Lease, and other military uses.

### SYNTHETIC RUBBER PROGRAM

The synthetic rubber program is the greatest consumer of alcohol today. In the year 1943, approximately 127 million gallons were required for this purpose. Although there are many types of synthetic rubber in the manufacture of which different intermediate materials are used, Buna-S is the principal synthetic being produced today. It is produced from Butadiene and Styrene in the ratio of about 3 to 1. Both can be made either from alcohol or petroleum hydrocarbons. Aviation gasoline has required such large quantities of Butylene that the petroleum industry has necessarily concentrated on this important use and passed along part of its share of the synthetic rubber burden to the alcohol industry. As a result the alcohol industry has been called upon to carry the major portion of the Butadiene program.

During 1942, the synthetic rubber plants were not ready for alcohol. During 1942, however, the Government was building up stock-piles to meet the future demand for this most important use. In 1943, the synthetic rubber plants consumed 127 million gallons of alcohol—more than the total production of alcohol in a normal prewar year. It is estimated that in 1944, synthetic rubber will require an estimated 365 million gallons.

### REQUIREMENTS CLIMBING

The "indirect military and civilian" requirements have been climbing steadily during the war. All of this alcohol is being allocated by the War Production Board. To keep the automobiles and trucks of the country rolling, a definite amount of alcohol for anti-freeze purposes must be set aside and distributed to all parts of the country. A dis-allocation in the distribution of anti-freeze would seriously impair the progress of the war effort. The War Production Board is allocating anti-freeze both as to the total amount which may be produced and to its distribution to principal population areas throughout the U. S.

1944 figures show a total requirement of more than 630 million gallons, more than half of which is accounted for by the synthetic rubber program. Production figures given by W.P.B. indicate that this heavy demand cannot be met by production alone. In order to meet military and essential civilian needs, W.P.B. will have to dip into the stock-pile. Regardless of Government action, certain types of synthetic rubber are here to stay, and that the synthetic rubber industry will remain a sizable user of alcohol after the war.

To those who feel that this country will be swimming in alcohol after the war, the following reasons are given for disagreeing with this attitude: (1) Of the total production of alcohol anticipated in 1944, it has been pointed out that 337 million gallons—or more than half of the total current supply—is being contributed by emergency wartime sources. There is little question that the distilleries at the first opportunity will return to the manufacture of whiskey, gin, and beverage spirits. Imports will undoubtedly be cut off; and the other producing facilities will swing back to their normal lines of business. This tremendous gallonage will immediately be removed from the industrial alcohol picture. (2) Unless economic forces are modified by Governmental measures, we can expect that the pattern of production of industrial alcohol will return to its prewar status. There will probably be very small stocks in the hands of the Government after the war. Molasses will again be the major source of industrial alcohol. The synthetic producers are expected to play a major role in the postwar era, but we shall undoubtedly find that a very high percentage of the synthetic alcohol will be used internally by these producers for the manufacture of other chemicals. (3) To balance the postwar availability of industrial alcohol, which will be in the neighborhood of 250 to 300 million gallons, we will have an increased demand. This increased demand will be made up of

Prewar Ethyl Alcohol Production

| | 1933 | 1937 | 1941 |
|---|---|---|---|
| Molasses | 82.6% | 75.3% | 70.1% |
| Grains | 4.2 | 8.5 | 5.9 |
| Other Fermentation | 3.3 | 0.7 | 0.4 |
| Synthetic | 9.9 | 15.5 | 23.6 |
| Total | 100.0% | 100.0% | 100.0% |
| Total Gallons | 59,452,000 | 115,291,000 | 155,934,000 |

# Short Adages

by R. O'MATTICK

IN the days before the War, when someone in the cactus regions had only to write to the Essential Oil Houses to get a dozen samples from each of them, no charge, and a letter with many thanks for asking, a young man was able to accumulate everything from Anise Oil to Yara-yara. There would have been a complete list had he only bothered to ask for Zedoary Oil. Those were the days when Orange-water was Orange-water and every Essential Oil House had hopes that by a full measure of cooperation, with extra samples thrown in for good measure, they would obtain the good-will of at least one budding genius born to be a combination of Guerlain, Farina, Woolworth and the International Business Machine Corporation. In this way our young man slowly saw the growth of a stock-pile of various odiferous liquids, including drams and drams and drams of Cassie Absolute of endless sorts and types. These cassies were recently bulked and the total, which added up to almost five ounces, was sold to a well-known perfume house for a price which shall forever remain a secret. Thus, even a sample hound has his uses for the good and well-being of one member of the Perfume Industry!

* * * *

Dr. Rowmateral wants to know whether any of our readers can get him in touch with someone who has been accumulating samples of Vetivert Oil.

* * * *

Otto Stock is puzzled. Why do suppliers, he asks, give a score of reasons for being unable to quote on a product. According to him, this is how one executive of a large firm told *his* story: "We have none in stock—besides, we haven't the raw materials for making it. Then, you know what the labor situation is and our equipment can't be replaced. There is also the transportation problem and the reagent to catalyze the reaction is a thorium salt. We couldn't make it—the thorium salt, I mean, even if we got the thorium because of the chlorine and the solvent is difficult because the containers are non-returnable. So you see why we can't ship you any dimethyl-holocobolus-octine-vaccuumate."

* * * *

Like the story about the army captain, who, asked by Napoleon why he didn't fire off the twenty-one gun salute when the Emperor made a surprise visit to the little garrison in Alpes-Maritimes, replied: "Sire, in the first place, we didn't have the cannon—". "Never mind the other reasons," said the Emperor, "but you deserve to be promoted for thinking of them, whatever they are."

* * * *

Our friend, Cory Ander, points out that much in our column has to do with shortages and that we never seem to run out of material because we can always fall back on this well-known subject. "What are you going to do," he asks, "when there are no more shortages?" Well, we haven't been much at post-war planning, so we don't know, except that we can always write in the future of the times when there *were* shortages.

* * * *

Some day, we hope it will be sooner than anyone thinks, conversations like this will once more be a reality:

MR. HEDGE: I don't need any geranium or otto of rose. I have enough of each to last me for years.

MR. DRIVE: How about lavender?

Mr. H.: I can buy it for two cents a pound less.

Mr. D.: Well, can I sell you some diethyl phthalate?

Mr. H.: I may send you an order for two pounds next month.

But it won't be so grim. Because Essential Oil Men heard such answers for years and years before the War, day after day. It never discouraged them. They kept right after Mr. Hedge until he wore out and gave them an order for three pounds of D.E.P. this month instead of two pounds next month. Or if they gave him up, they turned around and sold the stuff to someone else who first bought three pounds and then came back for ten more. It won't be so bad because there will be plenty of alcohol to dissolve the oils in and plenty of containers to put the solutions into and plenty of *new ideas* and *products* and *energy*—three ingredients which have always made the Industry full of electrons, as Dr. Rowmateral says.

* * * *

The Bond Drive has converted Fifth Avenue into an Avenue of Nations. Fifth Avenue is a street which means much to perfumes and cosmetics because many of the men and women connected with this eighth Lively Art work in offices on Fifth Avenue.

"This perfume is made with the musk of pedigreed skunks!"

# Important Report on Post-War Reconstruction

*Toilet preparations industry expresses its views on post-war reconstruction problems . . . Immediate removal of all quantitative export restrictions recommended*

by OUR BRITISH CORRESPONDENT

IN accordance with the Government's policy of planning for rehabilitation of British industry in the post-war period, the Board of Trade invited the toilet preparations industry to express their views on the problems of the industry in the immediate post-war reconstruction. The industry was asked to concentrate on the practical issues which would arise immediately upon an armistice; it was asked to assume that raw materials would be freely available, and to give particular attention to export trade. The following special committee was appointed by The Perfumery and Toilet Preparations Manufacturers' Section of the London Chamber of Commerce, and the Cosmetic and Toilet Preparations Trade Association, viz., manufacturers: L. J. Matchan, chairman (Max Factor, Inc.), H. H. Bagnall (Lever Brothers and Unilever, Ltd.), A. J. Black (Dorothy Gray, Ltd.), W. Colishaw (Coty, England, Ltd.), R. Wemuth (R. Wemuth, Ltd.), M. F. Fabricins (Countz Perfumery Co., Ltd.), T. Lyddon Gardner (Yardley & Co., Ltd.), A. F. Gunning (Pond's Extract Co., Ltd.), W. H. Osborne (Osborne, Garrett & Co., Ltd), and P. G. Pattinson (Bourjois, Ltd.).

### COMMITTEE REPORTS

This committee has now brought its first report before a meeting of the Perfumery and Toilet Preparations Manufacturers' Section of the London Chamber of Commerce, and the Perfumery and Toilet Preparations Export Group, to which only members of the Toilet Preparations Trade Association were invited. That joint meeting has unanimously approved the report which has now been presented to the Board of Trade. This is the Government department concerned, but it is not a Government report, and its proposals are recommendations only.

The first part of the report is confined to points of broad policy. A further report dealing in detail with raw materials, as well as factory space and labor will be presented as soon as possible. The period when the perfumery and toilet preparations industry was looked upon purely as one of "paint, powder and scent" has long passed, and much research involving considerable expense and the employment of highly-skilled technicians has resulted. Before the war its turnover was probably in the neighbourhood of some $75,000,000 annually, about one fifth of which was exported.

There was a relatively small number—fifty or so—of fair-sized factories, accounting for probably three quarters of the trade, some combining toilet soap with the perfumery and toilet preparations. In addition to these larger specialists concerns, there were a large number of smaller producers, and a fair amount of production of toilet preparations by manufacturing chemists, and others which latter constituted a small part of the production of general supplies for the retail druggist.

### BRAND OWNERSHIP BUSINESS

The businesses comprising the industry are largely proprietary businesses, or "brand ownership" businesses. The volume of trade in unbranded or "retailers own-name preparations" is in comparison limited. Many branded products are made for the owners of registered trade marks by some of the principal manufacturers. The branded products have set a high standard of quality, which in itself has been a large measure of protection to the general public.

During the early years of the war it became obvious that the Government departments looked upon the industry as supplying purely luxury goods. Restrictions on production by quota, the concentration of industry, restrictions on war materials, and on packaging material, containers, etc., accordingly followed. But the trend of recent legislation shows that this view has been changed. Public opinion has plainly demonstrated that most toilet preparations cannot be considered as luxuries enjoyed by the privileged few, but must be considered in the same category as cigarettes, sweets and beer, and similarly accepted necessities of a modern standard of living, for the mass of the people.

Control is now presumably in its final form, after successive stages of tightening up to meet the black market. Firms in concentration schemes can supply at the rate of 75 per cent by value of their sales in the standard year, June 1, 1939, to May 31, 1940; other registered manufacturers may supply at the rate of 33 1/3 per cent. Unregistered manufacturers who were manufacturing in 1941 may only supply direct to the public on the premises on which they manufacture, up to £41-13s.4d per month. It must be emphasised, however, that home trade demand is now at a very much higher level than 100 per cent of the standard year: it is still growing, and will continue to grow.

Taking as a yardstick the home trade in the twelve months ended May 31, 1940, and the export trade in that period to those countries which were not in the summer of this year, in enemy hands, the committee feels that, if materials are available, supplies on the basis of 100 per cent of that yardstick could be accomplished without serious difficulty in the first twelve months of the post-war period, although assistance from the Government in several directions

would be imperative. By taking the 1939/1940 year as a yardstick, the industries' needs for a greater supply which could be attained could be roughly estimated. An early return to their own factories would also be desirable, and some new machinery would be essential.

### EXPORT

It was decided by the committee to base plans for export of the first year to the markets which were not in enemy hands in the summer of 1940—these are mainly the Empire (other than the Far East), North and South America, North Africa, and the Middle East. The committee emphasised that perfumery and toilet preparations bring a very high return in overseas currency. The Empire markets are not the only or the main consideration; those concerns which did a world-wide export trade from the United Kingdom found foreign markets no less promising than the Empire. At the present time much of the trade that would have been done from France, and indeed a proportion of that which had hitherto been conducted from America is being looked after from the United Kingdom, and it will not necessarily revert to the original countries of supply after the war.

The present position is that export is restricted on a quota basis, the main object being to economise in the use of shipping space and also of labour and materials. An important restriction during the war is the agreement with the U. S. A. that lease-lend materials shall not be used for export, unless the export is essential for the prosecution of the war. This has, for the immediate moment, a severely restrictive effect in the toilet preparations trade in regard to the use of petroleum products, alcohol, and certain specific chemicals. It has also a great element of danger, in-as-much as the United States has been able to meet some of their overseas needs without being fettered in the same way.

### EXPORT RESTRICTIONS

It is essential that the European markets are contacted by the trade at the earliest possible moment, and that the Government give facilities for the necessary journeys. The committee also recommended the immediate removal of all quantitative export restrictions on shipments to the countries which trade is at present carried on on a restricted basis; namely the British Empire, the Western Hemisphere and other non-European occupied territories. This derestriction should be done before the end of the war if possible, or at the latest, immediately on the termination of the war in Europe. Similar embargos should then be removed at the earliest possible moment from the occupied, and other European territories. The committee also suggests that exportation should be controlled by means of licensing only the export of approved manufacturers' goods, i.e., the goods of those who have been granted export quotas, and any others who were exporting before the war, until complete freedom of action in the home trade is restored. Such a policy should, however, have due regard to the claims of those firms who, whilst having no prewar exporting experience, can show that they were established bona fide manufacturers and can market lines which have special opportunities in the export field.

The committee cannot adequately emphasise that it would be manifestly unfair that firms of mushroom growth during the war, and who have avoided concentration, should be allowed to use their advantageous position, whether in the export or on the home field.

The committee hopes that the British Government will aim at securing, as far as possible, that future barriers, such as import duties, shall not exceed the level necessary for the protection of the importing country's standard of living. The immediate realisation of this hope depends on international economic policy. The committee accordingly points out that, although it may be more advantageous to the nation, from the point of view of employment of labour, to export completely finished goods, it will be necessary, because of trade barriers and local competition, for the Government to recognise that exports cannot be viewed solely from the point of view of finished goods, leaving this country ready for resale in the foreign markets.

This situation, if it continues, may, the committee states, compel many British manufacturers to arrange for local packaging, and, possibly, complete local manufacture, if their trade is to stand any chance of re-establishing itself in the particular market, providing the income is transmitted to the United Kingdom. The Government should give facilities for materials to be sent, manufactured and semi-finished raw, out to British firms overseas' factories as soon as possible to enable them to start up again. All exporting houses should examine the advantages of joint local packaging, or manufacture. Because of the generally individualistic character of the trade there is little scope for comprehensive cooperative selling, but where an organisation exists, or is started on the right lines, and provided the same salesmen are not employed to market two possible competitive lines simultaneously, the possibility of using such organisations to market the products of different manufacturers should be examined.

British commercial attachés and trade commissioners should be practical men with a business outlook and they should return home frequently to refurbish their knowledge of British industry.

### TRADE MARK AND PATENT RIGHTS

As soon as possible international legal machinery should be put into force to re-establish British trade mark and patent rights overseas. There is no doubt that the Germans have played havoc with them. There will also be cases in which British-owned factories in territories now occupied will have been interfered with by the enemy, or where the Germans have interfered with British shareholdings in foreign concerns. There must be a speedy restoration of full British rights in such matters, or confusion and delay will be caused, which will be seriously detrimental to export trade.

It is imperative that the higher executives of those concerns interested in overseas markets should be enabled to make personal contact as early as possible with their overseas customers.

A far greater degree of cooperation between manufacturers as a whole, for example, in the pooling of information and experience than existed before the war is necessary. If it is to achieve maximum success in the export field, the trade must realise that only by being first can it obtain world-wide acceptance.

### DECONTROL AND DECENTRALIZATION

The earliest possible return to unrestricted trading should be the paramount objective, but this will not be immediately practicable, because of raw material shortages, and the period of time required to bring about complete deconcentration and derequisitioning. These are two unknown factors which must seriously affect the home market, and if not determined within the shortest possible time, may impede export development. An adequate and healthy home market is generally indispensable to the conduct of export trade. The committee recommends that control be retained until such time as deconcentration is effected, and during that period to work toward control by progressive stages of steadily increasing supply under license on the basis now operating. After the signing of the armistice, or such time as deconcentration is regarded as commencing, any firm which had deconcentrated would retain the right to the quota rate applicable to concentrated firms, or any other rights enjoyed by those who were concentrated during the war.

No new manufacturers should be allowed to commence in this industry until those who have made sacrifices under wartime legislation are in a position to take a full part in healthy, unrestricted competition.

The committee proposes that when the general principles of this report have been discussed with the Board of Trade, an examination should be made of the possibilities of making recommendations in individual cases which might eliminate any hardships as might otherwise be born by smaller concerns as a result, for example, of lack of financial resources with which to re-establish themselves to what in some cases will have to be new factories, or insufficient resources to take their immediate full shares in the export drive. Inadequate resources will also affect some firms in the training of labour and in their ability to derive a fair share of the "sellers market," which will continue for some time. The transitional period of decontrol and deconcentration should be as short as possible.

### ELIMINATION OF PURCHASE TAX

An immediate abolition of purchase tax after the war is most desirable. The industry should not be handicapped by discriminatory tax treatment. If the continuance of some form of taxation on general consumer goods is inevitable, then the industry would prefer something on the lines of an all-round sales tax (though not levied at the point of sale) which would be applicable at a low rate to all consumer commodities of a kind already subject to purchase tax.

### RAW MATERIALS, CONTAINERS, ETC.

Where abundant supply of raw material is not immediately available, a control of distribution to ensure fair shares of what can be obtained would be essential for a period. Cooperation between the industry and the organisations representing the suppliers might be able to ensure equality of distribution.

The committee further feels that, in principle, materials which have been completely withheld from the industry, or from sections of it, and which are still not in abundant supply, such as alcohol, and other solvents, petroleum products, best quality imported talc, plastics, collapsible metal tubes, and other items, should only be released in the first instance for use by those firms which used similar materials in the basic years, pro rata to that usage, but they recognise that such a position should not continue for a moment longer than necessary because of its effect upon enterprise of the firms thus affected.

It is vital to the industry that no unnecessary obstacles should be placed in the way of obtaining essential oils, and other aromatics, now to be found in Mediterranean countries which have been liberated from the enemy; and those obtained from Switzerland, France, and the Balkans may become accessible before the end of the war.

The British Government should take steps as soon as the armistice is signed, or earlier if circumstances permit, to free "blocked" capital now held by the Custodian of Enemy Property so that producers in France will be able to re-establish themselves, and to resume production of material which will be urgently required, especially for the export trade.

It is important that the considerable quantities of scarce materials—notably essential oils—held in foreign ports as a result of the shipping blockade should be released at the earliest possible date.

Abandonment or relaxation of packaging, and paper, and board control Orders should take place on the ending of the war in Europe, if not sooner.

The industry has surrendered most of its highly-skilled employees for the war effort, and with a return to normal output and competitive conditions a number of firms will need certain key people when hostilities cease.

---

**Industrial Stain Cleanser.** Much industrial dermatitis is due to skin cleansers, used to clean the skin, rather than to the substances soiling the skin, and the findings of L. Schwartz are abstracted in the *Bulletin of Hygiene*. Such cleansers may be alkaline soaps which abrade and dissolve the superficial epithelium, or volatile solvents which defat the skin, or bleaching agents which damage by chlorination or oxidation. The use is recommended of a sulphonated vegetable oil with a pH approximating that of the skin, free from sulfur trioxide with a fat content of about 50%, and completely miscible with cold water. Sulphonated mineral oils are not so good; they do not replace the fat lost by the skin. A useful cleanser is a mixture consisting of sulphonated castor oil, with a pH of 7.2 and an oil content of 50%, and of 2% of a wetting agent. Use the mixture in the same way as liquid soap, rubbing it into the skin and washing off with water. It has a smell which may be hidden by such a perfume as lavender or lilac. The cleansing power may be increased by adding 1 to 2% of an alkali, such as trisodium phosphate or sodium hexametaphosphate; but the alkali imparts "sting" if it gets into cracks or abrasions. (Thr. *Chemical Products 5*, **30**, *1942.*)

# The Gossiping Guide to the News

*Mid-western report shows public interest in toiletries increasing . . . Trend toward educating sales personnel . . . Heavy perfumes most favored*

by RAYMOND W. LYMAN

SIX weeks in Michigan, Illinois, Indiana and Ohio show that public interest in toiletries is increasing. It also showed up many places where the trade needs to improve its public relations. The following is a summary of brickbats and bouquets.

### DEPARTMENT STORE PERSONNEL

Although the department-store employee is usually good to look at, she is too often much too young to be able to answer questions about the product. We found the public reaction to the older clerk was more satisfactory.

### WARM POWDER SHADES PREFERRED

Miss Hahn, cosmetic buyer of The Fashion, Columbus, Ohio, reports peach and rose beige the all-year-round powder sellers. There has been a steady rise in night cream use. Hand lotions rate considerable attention as would be expected in a city of war-workers. The housewives need selling on other items as they are prone to use cold cream for everything. Miss Hahn has trained her personnel to take an interest in the individual customer and believes in building for the future. The girls bubble with eagerness for the products and never over-sell. As a result, the department was one of the nicest we visited.

### DEFENSE PLANTS

The small plants we saw have all kinds of special services for the employees. They are small enough to be able to give the individual worker beauty parlors on the premises, ten minute rest periods every two hours so the fatigue curve isn't so great, vitamin tablets and good-quality meals.

The larger plants have been struggling with out-of-town workers who work one day and lay off two. These plants have only the bare necessities to offer, such as protective hand and face creams. We wondered, seeing how much better pleased the employees at the smaller plants were, whether it wouldn't be feasible to break the large plants up into small units and give the same beauty service the small plants offer.

In a survey of war-workers, we were told repeatedly how tired the workers in the large plants become. Here is a place for the industry to step in, see that beauty parlors are available at convenient places and open for the second shift and the swing shift as well.

The first shift goes on at eight a.m. and works until 4:30 p.m. The half-hour is for lunch, 12 to 12:30. Monday nights the stores stay open for the workers until 9 p.m. in most of the middle-west. The second shift works from 5 p.m. until 12:30 a.m. The third shift goes on at 1 a.m. and stays until 6:30 a.m. Generally there is no arrangement for shopping, beauty treatments or recreation hours for either the second or the third shift.

If you could see the difference between the spirit of the first shift workers and those of the second or third, you'd supply the services they need to keep them on the job. I never realized facials, permanents, etc., could be such spiritual picker-uppers until I talked with the workers.

Here's a big patriotic job for the trade to tackle. Let's get at it!

The market is flooded with a variety of new names. The packaging is nice. The products are good. But as James Stillwell, the business counsel, pointed out, the very number offered will kill them off. No real merchandising effort is being made, no advertising backs them up. They are being offered at a time when the public demand is for a national brand of a quality product. The worst of it is that the flooding of the market will make it just that much harder for someone with a new idea to get started until this has all been absorbed or discarded. Basic business principles apply to toiletries even more than to other lines, he says.

So tell your salesgirls to dig in just a little harder, sell your customers on your product as you always have and presently you'll have the field to yourself again. . . .

### PHARMACEUTICALS

General Laboratories, Inc., report that they have enough trouble keeping their customers supplied with the three hundred odd pharmaceuticals they make and don't intend to bother with private brands until after the war. . . .

### BROADCASTING

In Indianapolis a recent broadcast by a traveling sales representative had presented only a musical program with scant mention of the product. A poll of listeners showed the broadcast had not made the impression that a previous broadcast by another house had made. In the earlier broadcast, the representative had talked about the line and the way to get the best effect from the line. Two weeks later counters in drug stores and department stores were still feel-

Customers Ask Questions

Beauty Treatment for Defense Workers

ing the effect of the good sales presentation. As one buyer said, "Who do you expect to talk about your product if you don't?"

### TRAVELLING SALES REPRESENTATIVES

Selecting personable sales representatives to carry goodwill through a territory is a task these days. Miss Dorothy Nichols, of Primrose House, is to be congratulated upon the use of personnel trained in research labs and familiar with the merchandising problems of the cosmetic industry. Such a person is charming Elena Stephens of whom we heard good reports on our western swing. Her Altoona, Pa., broadcast, for example, stressed the basic Primrose line. In the stores everyone was delighted with her enthusiasm and her ability to answer questions. Her summer-tan stockings were discussed generally, the customers being much amused at the water-color square she painted at the heel and the line of eyebrow pencil for the stocking seam. When we congratulated Miss Nichols on such representative she sighed, "She's going to be married the first of the month." Here's to the bride. And here's to Miss Nichols being able to find another such able representative!

### FARM NOTE

The Ohio State Control Laboratories are working overtime testing new fertilizer compounds and making recommendations for soils. The result of their work is increased production per acre as the farmer strives to offset by fertilizer the manpower problem. If an individual acre produces more, it is easier to harvest than two thinly grained acres.

Mr. Baringer of the State Enforcement Bureau reports that only late plantings of corn seem to interfere with the corn-borer. Treatments of some 460 acres a year for Jap Beetle control are given. But hope of bug control at present seems to wait on the development of DDT, now performing so miraculously at the various fronts. The fact that it kills honey bees, however, indicates that more work will have to be done on it to determine its toxic effects and uses. A recent meeting of entymologists from the middle states heard such a number of claims made for DDT that all state bureaus are most anxious to get some quantity to work with.

Experiments at Wooster are most heartening, says Dr. H. A. Waters, Department of Entymology, Ohio State University. A non-burning arsenical compound has at last been established. Using Basic Copper Arsenate in the proportion of 3 or 4 lbs. to 100 gallons of water the spray is adaptable for any farm use. As a dusting powder it may be mixed with sulfur, using 2 parts of sulfur to one of Basic Copper Arsenate for dusting beans and potatoes.

### CAPS

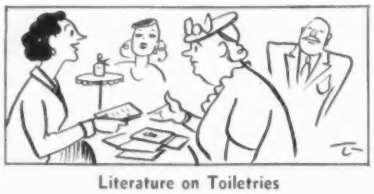
The Victory Cap Co. look at their orders and sigh. They say they'll eventually get them out for the material is there. But the girls work a week and then don't come back for two weeks for their pay. Meanwhile, the machine is idle. Somehow the orders do get out finally. Please order far ahead, everybody. . . .

### PAMPHLETS

In a Chicago department store we heard a matron ask for a brochure of the line. A pile was directly in front of her but she didn't see it until the clerk picked a folder off the pile. I looked at the printing job and it was almost invisible. A too thin line drawing was on the cover. In order to get in a lot of copy, the size of the type had been reduced to eight point. It was a thoroughly dismal job and would sell nothing to anybody.

One of the Chicago advertising men commented on this when I showed him a copy of the folder. "It's one of our accounts. Another city, thank heavens, handles it. The client insists on reams of copy instead of hitting the products hard. Why an eight-pager anyway? Four

Radio Good Advertising Medium



Literature on Toiletries

Personal Contact

would do if it were brief."

Personally I've never been able to see the point of hiring an advertising agency and then insisting on running every job yourself. But, lord love us, how many executive heads do just that! And if they would only travel around with me for a few weeks, they'd reform. Good sales-managers, good account executives are experts in their respective lines. Let them alone and they'll produce if you make them responsible for their work.

BEST COUNTER DISPLAY . . . Gourielli's. Very carefully worked out.

BEST WINDOW TIE-UP . . . Germaine Monteil's at Montaldo's. The placing of the mannequins managed to suggest they were about to use the cosmetics.

### WINDOW OBSERVATIONS

Cosmetics just thrown into fashion windows don't have the pull of suggestion. A lacy handkerchief in a mannequin's hand gives an idea that a near-by bottle of perfume has been used thereon. Flower backgrounds are always used to good advantage with floral bouquets in colognes or perfumes. But scarce as merchandise is, keep working with windows. What we do now in indirect advertising we reap in eight or nine years.

### PERFUME PROPORTIONS

Thomas Moon, head of the Thomas Moon Co., has a series of beauty salons which act as a background for his growing cosmetic business. He stresses a Cucumber Cream, a delicate green with a cucumbery odor which has a group of firm followers as a night cream. His permanent pads are made according to the formula of a French chemist friend who also gave him the idea that the blending of three times the amount of essential oil normally used in a perfume would build and hold a business better than anything else.

So many women have been complaining that the present-day perfumes and colognes don't last, that he decided to experiment as his

friend suggested. The results prove that the trade had better get back to a lasting perfume as quickly as possible. . . .

### TEN CENT STORE TRADE

The survey showed that customers want questions about the products answered and don't feel satisfied that the new clerks can respond correctly. Manpower problem again. What about a book on the line to be sent to the buyer of a store and kept there for the clerks?

### SALES EDUCATION

The Merle Norman Studios are well represented in the middle states. Their work with their sales personnel points a lesson for other lines in these hectic times. Discovering that the customer wants real answers about the products, the girls are not only given lessons in applying make-up and using the line correctly, but are given THE AMERICAN PERFUMER to read.

Each issue is gone over carefully: trade news and prices of various basics are gone over first. Then the articles on chemistry or oils are read and digested. As an executive said, "You'd be surprised how much the girls learn after reading THE AMERICAN PERFUMER for a year."

I asked how the girls liked an intensive education in addition to selling. He replied it made them more interested in their work, fastened them to the line more thoroughly as they appreciated the work that went into a product. The studios pay their employees as well as the defense plants do and they service the defense workers as their share in the war effort.

### TREND IN PERFUMES

We were much surprised to see the trend toward the heavy odors. The slightly oriental or the heavy bouquet with an oriental touch is definitely the favorite. Far below it comes the light floral fragrance. The influx of southern workers may account for this switch in taste. . . .

### SOAPS

A big fat cake of soap is the war worker's delight. Heavily scented, please. A large box of heavily-scented dusting power to accompany it was the preference of the Detroit workers. Leg make-up was going tremendously and was surprisingly well applied. Fitted bags and luxury lingerie were in demand with low-priced merchandise lagging. . . .

### HOUSE-TO-HOUSE

When everything is so speeded up, it is interesting to hear of the good work in public relations done by the local representatives of Avon Products. In Southern Ohio, Miss Minnie Moore told of her experiences on D day when she found most of the mothers ironing (it was Tuesday) and listening to the radio. They welcomed her mightily for here was a ready ear. This retired teacher brought comfort to a number of homes that morning. This personal contact is why the personal sales representative will never be replaced by a store.

Miss Moore reports an increase in calls for extracts. Vanilla is the favorite, lemon the second and a growing demand for black walnut.

Another interesting thing this teacher did this month was to lecture to an entire school, at their invitation, on the ingredients and the proper use of cosmetics. Consumer education at the source!

### ADVERTISING

Institutional advertising is falling way behind all through that section. I seriously advocate the immediate start of newspaper ads in the small towns which feed the bigger cities. Space is a little more expensive but it is available. If you let this time go, you're not building future customers but will leave them wide open for somebody else's campaign. . . .

### CAMPAIGN NOTE

Did you see how the columnists played up Claire Booth Luce's No-Shine Make-up under the Kleig lights and in melting temperatures. I hope some of you follow up that lead! Get on your toes, everybody, for future business. . . . ORDER . . . Have you gotten all those Christmas orders in?

---

The Wartime Prices and Trade Board has issued through W. M. Grant, administrator of Pharmaceuticals administrator's order No. A-1257, effective June 20 relating to cosmetics and toilet goods which revokes administrator's order No. A-302 restricting the manufacturers in their production, packing, distribution and sale of cosmetics and also revokes administrator's order No. A-535 which restricted the packaging of toilet goods and prohibited the manufacture of specific kinds of toilet goods.

The provisions of the new order will permit manufacturers to resume production of goods in sizes and kinds which have heretofore been prohibited. Where a manufacturer resumes production of goods in a size or kind for which his maximum price has been established in accordance with the Wartime Prices and Trade Board regulations he shall not sell or offer to sell those goods at a price which is higher than the maximum price established heretofore. In the case of goods in those sizes and kinds for which no maximum price has been fixed under the said regulations, the manufacturer shall submit the prices for approval as required by the provisions of order No. 214.

### Battle Front Beauty

Somewhere near a fighting front, one of our valiant Army nurses, and director of a hard-working crew of forty-two nurses in the field, somehow managed in odd moments to write a friend here in the States, where in due course of events, the letter finally came across the desk of the president of Sales Affiliates. Excerpts of the letter follow:

"Upon arrival, I was immediately plunged into a campaign of mud, blood, malaria and terrible heat. If you could see the human results of the Italian campaign! One just doesn't want to sleep; there is so much to do. Despite enemy bombings we follow the men and set up our tent hospital, where the wounded are brought in from the front.

"Our beauty parlor is on the banks of a stream. The stream is our bathtub. The beauty parlor consists of a tent with handmade plank chair and a window about five feet up. Outside the window is a wooden tower with a barrel at the top.

"When we shampoo our hair, we hold our heads outside the window, we tip the barrel, and we get our rinse. I forgot to tell you that we heat a big tub of water over a camp fire, and that helps."

# World-Wide Survey of Oil of Lavender

*Lavender produced successfully in the Puget Sound area . . . Physico-chemical properties good but not as fine as French oils . . . Australia, South and East Africa also producing regions*

by DR. ERNEST GUENTHER

*Chief Research Chemist, Fritzsche Brothers, Inc., New York, N. Y.*

TRUE lavender, from imported French plants, has been grown in the Puget Sound district of the State of Washington by L. J. Wyckoff, who spent more than fifteen years of pioneer work on this task.[1] Earlier experiments with local material supposed to be true lavender, which turned out to be a hybrid, had produced an oil of the lavandin type. The project, comprising three major plantings of 3 to 14 acres with a few test plantings at other locations, definitely established the fact that a good grade of lavender oil, similar to the French type, can be produced in that area with some slight variations due to location, soil, and climatic factors.

The upland soils of the Puget Sound area are of glacial formation with a sand or gravel subsoil and top soil varying from a very fine sandy loam to heavy gravel. Drainage is excessive almost everywhere, but the deep rooting habits of the plant permit its growth even in the worst grounds, provided reasonable cultivation is given to preserve as much moisture as possible. However, lavender will not grow in soils of high clay content or where local drainage has produced hard spots. A light, well drained, sandy loam gives the best results with a substantial increase in green material as well as in quantity and quality of oil. This is particularly true of a new fairly strong soil as against continuously cropped, worn out soil. Although lavender is supposed to prefer soil with a good lime content, it apparently does as well, near Puget Sound, on lime deficient soils. Experiments with liming and fertilizing showed that they are of little, if any, benefit.

### CLIMATIC CONDITIONS FAVORABLE

Climatic conditions around Puget Sound are very favorable, with ample rain during winter and short freezing spells which provide the needed dormant period. Summers are dry and warm without being excessively hot, and the actual harvesting period in late July is generally free from rain. Locations close to the Sound afford much more frost protection and would be preferable; at some points a few miles back, late spring frost might injure the current crop of blossoms or a very severe winter freeze kill the plants back to the ground. In this case a year's crop would be lost, as the new growth from the crown produces only a few blossoms the first year after the freeze. Such frost damage is rare even in the less favorable locations and does not occur close to the Sound.

Starting the crop from seed is slow, furthermore germination uncertain. However, seed sown in the fall, on top of a firm seed bed, lightly mulched, will usually give a good stand of plants which should remain in place during the first year and then be transplanted. With propagating stock available, either slips or layered shoots will come into production much sooner and can be set out any time during the dormant season. Slips can be started at any time, but during the summer months they should be set in a bed where

Lavender Field — Seattle, Washington

American Lavender — Seattle, Washington

they can be well watered. For large scale operation, direct setting during winter and early spring produces best results. Large old plants do not withstand moving, but they can be transplanted if most of the top is cut off and the roots cut back to a few inches. Smaller layered shoots can be handled with impunity at any time during the dormant period, but will not do well if moved after growth starts in the spring, unless set where they may be watered and given special care.

A two-row transplanter can be used where similar two-row cultivation is planned, but should be operated with a special slow-speed gear in the tractor, as the slips or layers cannot be separated and handled as rapidly as most plants set in this manner. Even at best it is necessary to fill in many misses by hand.

The amount of cultivation required varies widely with location and condition of the ground, but the mild, equable climate keeps many weeds growing the year round and there are a number of wild grasses which, if at all established, may require two or three years to eliminate. Bracken is also troublesome in most locations but can be fairly well killed off within two years if cut off as it comes up. Even on a well kept tract the plant will require two cultivations during the spring and early summer and another in the late fall about the time of the first frost. This, in conjunction with a hoeing after each spring cultivation, will keep the average planting in good shape. Weedy ground that has not been previously fallowed will call for much extra weeding and hoeing the first year, the amount depending entirely on individual local conditions.

### HARVESTING OF THE CROP

Hand cutting of the crop is expensive and unsatisfactory even when a sufficient crew of cutters is available, as they leave the planting in bad shape and the cutting cost would run from 30 to 40 per cent of the gross crop value. Several experimental harvesters have been tried. A small header mounted in front of a tractor is now being used, the material being carried by a draper to large boxes mounted on a frame on the side of the tractor. Together with reserve boxes on a rear frame, they serve the present operations, but modifications are being made from year to year in an attempt to secure the best possible results. The plants are set in rows 3 feet apart with the plants 18 inches apart in the rows to provide lateral support when cut. This gives a flat topped, low hedge which the harvester cuts with reasonable efficiency.

### DISTILLATION FOLLOWS CUTTING

Distilling is done as soon as possible after cutting, each cut being processed the same day. A locomotive type boiler generates live steam, the steam pressure being reduced before entering the stills to an average of about 7 pounds. Yet, considerably higher boiler pressures are maintained to avoid fluctuations. The steam enters the stills through a hydraulic joint, which permits swinging of the stills for dumping, and thence to a perforated grill in the bottom of the stills. The latter are of shallow type, i.e., larger in diameter than in height, which permits rapid distillation. Distillation lasts only about 30 minutes but the bulk of the oil comes over in the first 15 to 20 minutes; runs longer than 30 minutes, produce very little, if any, oil. This, according to Mr. Wyckoff, is probably due in part to the type of equipment employed; even when using a taller still, the time is short enough to show that the condition of the plant material is of prime influence upon the length of distillation. After being condensed in a long tubular condenser, the oil is collected in a special three-chambered receiver which answers the purpose of several receivers, arranged in series. The yield of oil from different locations averages about 0.75 to 1.00 per cent, but the actual location plays an important role in this respect.

The total quantity of green material produced varies considerably with location and age of the plants. On reasonably good ground, the quantity will amount to about one ton per acre by the third year, increasing up to about 3 tons per acre by the fifth to sixth year. Even on poor, exhausted ground one to two tons per acre can be secured by the fifth year, but there has been no real large scale planting which would give a fair average.

The present plantings are on very poor ground which was utilized as a matter of expediency; they can only be considered as a large scale experiment, a pilot operation for other possible developments. The work has been hampered by insufficient financing and other factors, but at least it indicates that lavender can be produced successfully in the Puget Sound area.

### PLANT RESEARCH FOUNDATION

About eight years ago, Mr. Wyckoff organized the Plant Research Foundation for the purpose of continuing experimental work with lavender and other essential oil and drug plants. Preliminary work with some lavender plantings established strains of equal blooming date, and has proceeded far enough to prove that the blooming time of any given plant is a fixed characteristic. Thus,

Looking up to the Forest — Kenya, East Africa

it becomes possible to propagate from early bearing strains; such a planting will mature two to three weeks before the average. This also indicates conversely—although as yet no planting has actually been made—that late blooming plantings could be established. It would permit harvesting at a time when the majority of the plants are in full bloom, instead of harvesting many that are immature or overripe, the practice followed at present. This promises not only a better oil percentage but also a longer harvesting season. Another problem being experimented with is the establishment of strains that would give a higher percentage of oil. This can probably be accomplished by plant selection, according to the method suggested by Nesterenko.

Lavender seems to take kindly to the peculiar climatic conditions prevailing around Puget Sound, as is indicated by the ease of propagation and the fact that it seeds itself freely, i.e., volunteer seedlings are always present throughout a planting. Furthermore, the life span of the plants is much longer than in other countries. Plants set for three years in one location and then moved to another where they remained for ten years before being used for propagating, continued to increase in size and productivity. Thus, the life of a planting would seem to be at least twenty-five years, numerous hybrid plants of that age having been observed. It is also possible to renew the plants when they get tall and leggy by cutting them down to the ground; a new head will be formed in a single year.

### PHYSICO-CHEMICAL PROPERTIES

American lavender oils distilled on the Puget Sound and analyzed in the New York laboratories of Fritzsche Brothers, Inc., had properties which varied between the following limits:

| | |
|---|---|
| Specific Gravity at 25° | 0.876 to 0.884 |
| Optical Rotation | —5° 56' to —8° 17' |
| Refractive Index at 20° | 1.4615 to 1.4656 |
| Ester Content | 32.7 % to 42.1% |
| Solubility at 25° | Soluble in 2.0 to 4.5 vol. and more of 70% alcohol. Several lots were incompletely soluble in 10 vol. of 70% alcohol. |

The odor of these American oils was, in general, very good though perhaps not quite as fine as that of selected genuine French oils. However, it was absolutely characteristic of true lavender, French type, with no indication of lavandin or spike lavender. The same is true of the physico-chemical properties.

### AUSTRALIAN LAVENDER OIL

According to Kenny,[2] lavender has also been produced near Launceton in Northern Tasmania. The southern latitude of this section is approximately the same as that of Southern France in the Northern Hemisphere. The land around Launceton consists of hills originally covered with eucalyptus and mimosa and is well adapted for lavender. The plantings were started in 1922 from imported French seed. In 1937 they covered about 200 acres yielding approximately 6,000 pounds of plant material per day during the harvesting season. The oil is said to be of very good quality with a high ester content. It has been exported mainly to England.

A sample examined by the author in Australia, end of 1938, closely resembled the French type of oil.

### SOUTH AFRICAN LAVENDER OIL

Lavender was grown experimentally also in Kirstenbosch, South Africa, from seed obtained through the Botanical Garden in Kew, England.

The oil (yield 0.7 per cent as calculated upon the fresh flowers; 22.5 pounds of oil per acre) had the following properties:[3]

| | |
|---|---|
| Specific Gravity at 15° | 0.8901 |
| Optical Rotation | —7.25° |
| Refractive Index at 20° | 1.463 |
| Acid Number | 0.7 |
| Ester Content, calculated as Linalyl Acetate | 49.0% |
| Solubility | Insoluble in 10 vol. of 70% alcohol; Soluble in 0.9 vol. of 80% alcohol. |

The odor resembled that of French lavender oil but was somewhat weaker.

### EAST AFRICAN LAVENDER OIL

During a visit to Kenya Colony in 1937, the author visited the estate of Mr. Cecil T. Soames in Marindas, Molo, and found lavender plantings covering about 50 acres. The greatest part was planted with lavender imported from Seal Herb Farm in Kent, England. Despite an altitude of 12,300 feet, this type of lavender seemed to grow well in Marindas. The oil obtained had a low ester content, resembled the English type in physico-chemical properties as well as in odor.

A sample examined in the New York laboratories of Fritzsche Brothers, Inc., had the following properties:

| | |
|---|---|
| Specific Gravity at 25° | 0.877 |
| Optical Rotation | —12° 25' |
| Refractive Index at 20° | 1.4699 |
| Ester Content, calculated as Linalyl Acetate | 8.8% |
| Solubility | Soluble in 1.0 vol. of 80% alcohol, opalescent with more. |

Efforts to raise also French lavender, from imported French plants, failed completely, perhaps for climatic reasons. In Southern France, lavender undergoes a dormant period during winter which was evidently not the case in East Africa.

It is interesting to mention that Mr. Soames also experimented with spike lavender, which seemed to grow very well in the high altitudes of Kenya.

[1] See also Wyckoff and Sievers, *Am. Perfumer* 51 (1935), 67.
[2] *Perfumery Essential Oil Record* 27 (1936), 194.—*Soap, Perfumery & Cosmetics* 10 (1937), 676.
[3] *Bull. Imp. Inst.* 28 (1930), 8.

*(Editor's Note: This article will be continued in an early issue.)*

---

▸ Frederic I. Rowe export manager of Shulton Inc., New York, N. Y., has returned from a three months' tour of South America where he appointed representatives in five countries.

▸ Wallace Bush of Ungerer & Co., New York N. Y., was runner up in an outstanding golf tournament at Essex Fells, N. J. last month. In the tournament Byron Nelson who won the so-called world golf championship last year by defeating Craig Wood, broke the Essex Fells Country Club course record by one shot with a four under par 66 in capturing the club's Red Cross benefit tournament. Nelson paired with William Regan 18-handicap player for a net 62 which topped the team on which Wallace Bush played by one shot. B. T. Bush also turned in an excellent score in the tournament.

---

The Procter & Gamble Co. has published a new booklet by Nathaniel R. Whitney, economist for the company. The book is entitled "Business and Government Cooperation for Post-War Prosperity."

# Technical Abstracts from Scientific Literature

*These brief abstracts listed provide a convenient key to current scientific literature of the world on perfumes, cosmetics, toilet preparations, soaps and dentifrices*

**Parasiticidal aerosols suitable for combating flies, roaches, mosquitoes, etc.** (To the Secretary of Agriculture of the U. S. A. and his successors in office.) U. S. 2,321,023, June 8. Use is made of finely divided droplets of a solvent such as dichlorofluoromethane containing less than 10% of a colloidalizable material such as one comprising sesame oil and pyrethrins, remaining colloidally suspended in the air after evaporation of the volatile solvent from sprayed droplets. (Through *C. A.* **37**, *6775-6, 1943.*)

**Antioxidant for fats and oils.** U. S. Pat. 2,333,656. A process of inhibiting oxidation and the development of rancidity in oleaginous matter comprises adding a small amount of a compound selected from the group consisting of naphthols, quinones, and quinols and a small amount of an ascorbic acid.

**Antioxidant for fats and oils.** U. S. Pat. 2,333,657. A composition of matter comprises an oleaginous material in which is included a small amount of caffeic acid.

**Pudding Powders.** Ger. 728,982. Starch is subjected to a mild degradation by oxidation in a manner such that when the product is stirred with cold water it forms a pudding-like mass.

**Industrial Dermatitis.** Although dermatitis in industry is not notifiable, the number of cases voluntarily reported has increased from 2,000 cases in 1938 to nearly 5,000 in 1940. A recent discussion on the subject, Proc. Roy. Soc. Med., produced some interesting details of cases caused by various industrial processes. Dr. Klaber, for example, raised the point that ordinary lubricating oils only cause oil acne, and never anything like a true dermatitis, but cutting oils are causing much dermatitis. He asks, are the responsible agents known, and is it possible to substitute one cutting oil for another? Also he mentions that bakelite substances seem to be specially tiresome in the form of liquid varnishes and "one would be interested to know why they are being used so much and whether they are always phenolic resins."

These points serve to stress the great lack of collaboration between industrial scientists and medical men. It would surely be to the benefit of all if these and similar questions were settled before any particular process or manufacture is adopted by industry. In many cases the saving in human misery would be appreciable. Possibly more attractive at the present time would be the saving of working hours. It is obvious that medical men, and dermatologists in particular,, must go more often into the factories, for operational research is as necessary in industry as in war. (Through *Chemical Prod.* **5**, *71, 1942.*)

**Hair Straighteners — Analysis of.** J. F. Armstrong. *J. Assoc. Official Agr. Chem.*, **25** *(1942), 932.*—A representative formula of the ointment type hair straightener may include lard, petrolatum, water, starch, sodium hydroxide and sodium carbonate. A method (technique described in detail) has been devised for the determination of free alkali (sodium hydroxide) and carbonates (sodium carbonate). It consists essentially in repeated extraction with petroleum benzin by boiling, chilling, centrifuging and decanting; extracting the residue three times (by centrifuging and decanting) with freshly boiled neutral alcohol; titrating the alcoholic extract with decinormal acid to phenolphthalein end point, which gives free-sodium hydroxide; dissolving the residue from the alcohol extraction in water and titrating with decinormal acid to methyl orange end point, which gives sodium carbonate. The method gives concordant results in duplicate determinations. (Through *J.A.Ph.A.* **33**, *35-6, 1944.*)

**Manufacture of Coffee Essence.** Brit. 548,889. Extracts prepared from coffee are subjected to a process of oxidation by treatment with an oxidizing agent, e.g., Hydrogen Peroxide or oxygen. This treatment improves the taste of the coffee extracts. (Through *C. A.* **38**, *424, 1944.*)

**Mercury Detector Soap.** In an effort to reduce mercury fulminate dermatitis in the explosives industry, H. S. Mason and I. Botvinich of the U. S. Public Health Service have formulated a liquid soap, which by a change of color, shows the presence of traces of this dangerous chemical upon the skin. The formula of this special soap, as given in *Public Health Reports* (**58**, *1183, 1943*), is as follows:

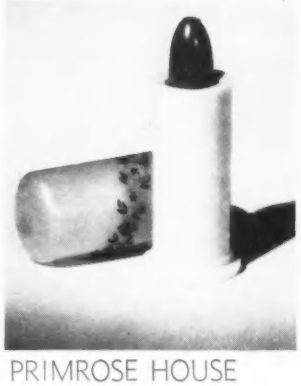
| | |
|---|---|
| Diphenylthiocarbazone | 0.18 Gm. |
| Triethanolamine | 250.00 cc. |
| Liquid Soap | 750.00 cc. |
| Hydroquinone | 0.015 Gm. |

The soap, as produced, is orange in color, but in the presence of mercury salts it changes rapidly to a deep, easily recognized purple. The reagent soap solution is said to be so sensitive that one drop will indicate the presence of a minute quantity of mercury, from 0.000002 to 0.000001 Gm., per square centimeter. (Through *Chem. Ind.* **54**, *226, 1944.*)

**Geranium Oil-rhodinol and l-Citronellol.** Anton Rosenthal. *Deut. Parfum-Ztg.* **27**, *153-4 (1941); Chem. Zentr. 1942, I, 1315.* Com. l-citronellol and rhodinol are mixtures of citronellol, geraniol, phenethyl alcohol, linalool, terpinol and menthol; rhodinol frequently contains traces of isomenthone. R. found in the geranium oil from the Belgian Congo small amounts of 3-hexen-l-ol; this occurs either free or esterified, in the oil refractive index 1.4398.

# Packaging Portfolio

SCHIAPARELLI



PRIMROSE HOUSE

HOUSE OF WESTMORE

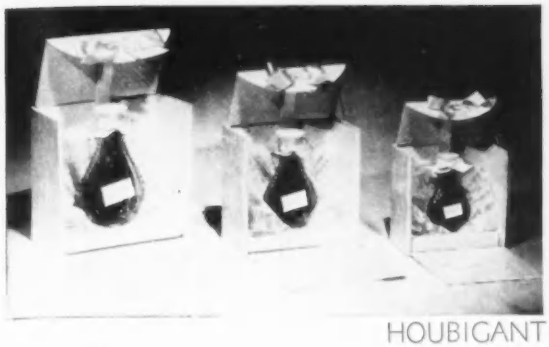
SCHIAPARELLI: Shocking Stocking comes in two shades—Caramel and Chocolat. Perfumed with Shocking it is said to leave the legs soft, velvety and fragrant as well. This is a leg make-up which stays on until removed with soap and warm water.

PRIMROSE HOUSE: A new shade of lipstick—a light clear red—introduced to wear with summer prints and pastels. Its creamy texture and non-drying quality remain unchanged. Promenade lipstick comes in a new, pink plastic case decorated with dainty forget-me-not blossoms.

WESTMORE: Overglo is the new liquid-cream foundation which was first created for use in technicolor pictures, and now modified for street use. Overglo's base is emollient which helps to preserve the natural suppleness of the skin. One drop of this foundation cream produces a satiny film, camouflaging large pores; hides freckles.

YARDLEY: A new metal lipstick container, attractive, durable, and practical as their pre-war one, made of Government released metal. The entire case is brass-finished giving a rich, gilt effect. A vivid red enamel band encircles the base of the stick while a decorative paper band with the original Bond Street motif goes the rest of the way up. In six glowing shades, the new Yardley metal lipstick will make its debut in August.

YARDLEY



HOUBIGANT

IMRA

HOUBIGANT: Chantilly, a new perfume, is presented in a charmingly-styled bottle having a plastic cap and tied with a pink ribbon.

IMRA: A pleasant and efficient preparation for removing superfluous hair, back on the market in tubes. It is snowy white like a fine cream in consistency and has none of the unpleasant odor that makes the use of depilatories an unhappy task. An essential aid to good grooming.

ANTOINE: Stocking Stand-In made from a completely new and improved formula has both the color and the texture of the sheerest stockings. Guaranteed not to smudge, run or stain, it can be applied at night and be perfect for the next day. Quick and easy to apply too!

ROSE LAIRD: Designed for women who are their own hairdressers, Quix-Set comes in a ten-ounce bottle with a wide neck so that a comb can be dipped directly into the bottle and run through the hair.

DERMETICS: Here is a new approach called the "Artist Portrait Make-up," a make-up which considers all those important "finishing touches." The automatic powder puff and its counterpart, the automatic rouge applicator are an aid in applying make-up more artistically.

ANTOINE

ROSE LAIRD

DERMETICS

# Recent Cosmetic Developments and Their Post-War Significance

*Despite wartime handicaps the cosmetic industry continues to experience increase in sales . . . Recent scientific achievements for the war front as well as the home front.*

by MAISON G. DENAVARRE

NOTWITHSTANDING shortages in manpower, transportation, equipment, containers and materials, the cosmetic industry has continued to note a lusty increase in sales throughout the war. Part of this increase may be attributed to the presence of more money owing to higher wages and greater employment. Nevertheless, a large portion of the increase is due to the natural growth of the industry, which for all intents and purposes, was born during World War I.

Figures released by the U. S. Department of Commerce indicate that the cosmetic industry of the United States will probably double its present sales volume within about ten years. The cosmetic industry is growing at a fast clip. In 1929, it did but $194 million; in 1935, only $119½ million; in 1939, $395 million and in 1943, 594 million dollars in business.

In spite of growth and wartime handicaps, the industry has taken time to engage in production for war. Some cosmetic manufacturers within the United States are actually engaged in assembling emergency rations, blood plasma units, bottling of the military insect repellent, making poison gas simulants, manufacture and packaging of facial camouflage, sunburn preventive cream, antichap-antisunburn lipstick, flashburn cream, skin marking pencils, shark repellent and dye markers for airmen falling in the sea. Besides these, some manufacturers have formed new or separate divisions to fabricate a score or more of mechanical objects and pyrotechnic products. There are undoubtedly numerous other war activities with which I am not acquainted.

### SPECIAL NEEDS DEVELOPED

Some products were developed in co-operation with the Army or Navy Departments to meet special needs. Thus, the sunburn preventive cream has to prevent sunburn for a period of seven hours. It must be non-greasy, non-sticky and water-proof. It must be stable from 50°F up to 150°F. It is readily seen that the specification is extremely rigid, and difficult to meet. However, a satisfactory product was developed and delivered to the Quartermaster.

In the case of facial camouflage, a formidable problem was posed due to the insect repellent that had to be included in the formulation. The camouflage had to be stable at from 20°F to 150°F, leaving a dull, non-greasy film, containing safe pigments in such concentration that they would completely cover the natural color of the skin when applied in a thin film. The material had to be readily removed with soap and water yet had to be water repellent. It may seem easy to formulate such a product until one actually tackles the problem. From the many samples that I have seen, few could meet these intricate specifications. In fact, when the U. S. Army Engineer Corps actually developed a specific formula and sent it out for bid, only about 12 per cent of the manufacturers could make a product that met the specification.

This war production of the cosmetic industry shows that it has been extremely conscious of it's duty to Country. War work taught the industry that—"The Difficult We Do at Once. The Impossible Takes A Little Longer."—a motto seen in the offices of the United States War Department. A considerable amount of knowledge gained from war production will enable manufacturers to develop still better cosmetics for future use.

Orders by Post Exchanges for some items have been strapping indeed and even though manufacturers were short of materials, equipment and personnel, they nevertheless, met the orders as well as many orders that were turned in by various Allied Nations Purchase Commissions.

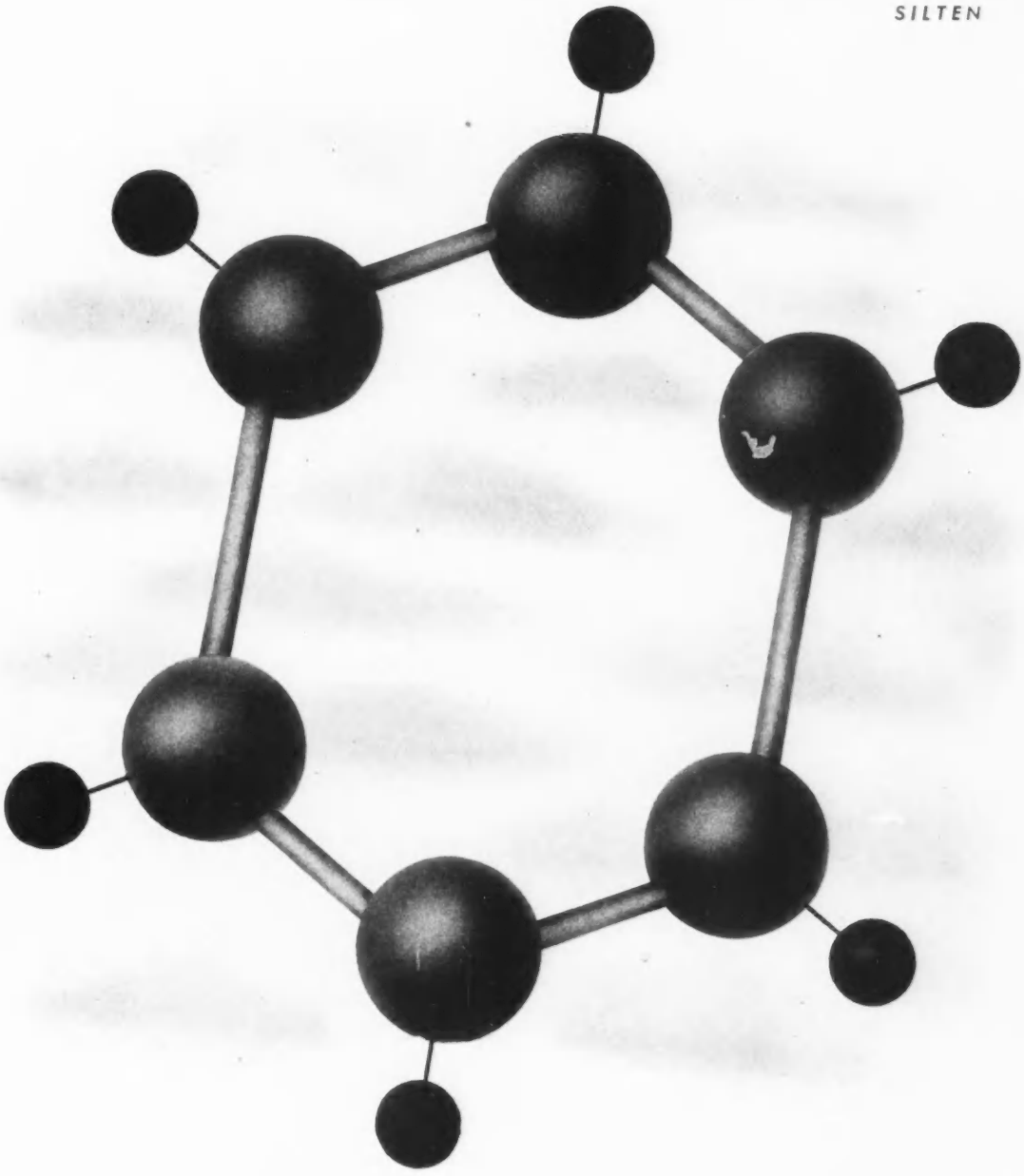
It is expected that everyone will do his bit in time of war, so these things are not called to your attention boastfully, but to show that the cosmetic industry has been steadfast in its belief that the National Welfare came first.

### PRODUCT CHANGES

As a result of the war in part and largely because of the composite progress of the industry, cosmetics in general will be modified although certain creams and lotions, permanent waving solutions and make-up will see comprehensive shuffling of formulas.

In addition to these, a lot of new products will creep in, such as hormone creams, shaving aids, shampoos, insect repellents, new solvents and emulsifiers. Products like leg make-up will be still further perfected and will continue to enjoy a substantial sale even after the finest stockings are available. Leg make-up is a cool, inexpensive style aid;

SILTEN



# *Iso Bergamone*

**the *scientifically* developed synthetic Bergamot oil**

**POLAK & SCHWARZ INC. 667 WASHINGTON ST., NEW YORK, N. Y.**

New

# Safeguards for Beauty

## WITH PROTECTION BY GIVAUDAN

Dermatitis is one of the most common and costly of occupational diseases. It takes a huge toll in lost time and impaired efficiency. The cosmetic industry, alert to the challenge in the situation, has come forward with the most practical solution to the problem yet conceived. This is the use of protective ointments, creams and lotions which cover the skin with a protective layer that withstands the irritating effects of cutting oils, solvents, greases, acids, paints and many other materials that cause trouble.

For additional protection in the formulation of such ointments, creams and lotions, Givaudan's Compound G-4 offers exceptional germicidal, antiseptic and fungicidal properties. Non-toxic and non-irritating, it is one of the few materials acceptable to the U. S. Army Quartermaster Corps for use in intimate contact with the human skin. As a highly efficient mildew-proofing agent, it is used extensively in the production of mosquito netting, balloon cloth, hammocks and other special "G.I." fabrics. Here is an example of Givaudan's versatility in developing new types of products that not only meet the needs of the perfume and cosmetic industry but other industries as well. We are prepared to work with you on adapting Compound G-4 to your formulation requirements.

**BUY WISELY...BUY GIVAUDAN**

*Givaudan-Delawanna, Inc.*

330 WEST 42nd STREET • NEW YORK 18, N. Y.

# ANTOINE CHIRIS

Antoine Chiris was established in France in 1768 and all through these years pioneered in the development of its long-known worldwide organizations. The American branch was established in New York in 1899.

# CHIRIS

## is prominent in

## PERFUME BASES

## AROMATIC MATERIALS

## for

## PERFUMES • COSMETICS • SOAPS

Long and persistent experience in research enables Antoine Chiris to solve your problems of replacement, substitution or adjustment.

## ANTOINE CHIRIS COMPANY, INC.

115-117 EAST 23rd STREET, NEW YORK, N. Y.

SOLE DISTRIBUTORS IN NORTH AMERICA FOR

PIERRE DHUMEZ ET CIE — **ETS ANTOINE CHIRIS** GRASSE, FRANCE — PILAR FRERE

ANTOINE CHIRIS, LTD., LONDON, ENGLAND

# Manufacture and Sale of Perfumes and Cosmetics in North Africa

*Abundance of beauty products in spite of chemical shortages . . . packaging hardships . . . lack of imports . . . The industry desires to establish close touch with principal firms in America*

by MICHEL RAINEAU

THE perfume industry in French North Africa, and especially in Algeria, is quite flourishing in spite of, or rather on account of the war. Indeed, as is known, this country was a great exporter of raw materials before 1940, both to France and foreign countries, but above all to France. According to custom-house figures, dating back to 1938—by the by, the only ones up to now available—the exports of geranium essences attained for the above year 22.859 kilos, worth 4.572.000 francs, out of which 5.378 kilos went to the United States; 16.690 kilos to France; 615 kilos to Great Britain; 46 to Germany; 30 to Japan. Of lemone (lemon) essence, the entire output of 184 kilos went to France. During 1938, which can be taken as an average year, Algeria alone received from France and other foreign countries, but especially from France, 1.607 metric quintals (160.700 kilograms) of fine perfumes, worth 11.800,000 francs; from France 612 metric quintals of perfumery soaps worth 5.000,000 francs; 5.480 kilograms of various volatile essences worth 773.000 francs; and last, and still from France, various cosmetics and other beauty products totaling 6,053 metric quintals for a value of 107,000 francs.

### BEAUTY PRODUCTS ABUNDANT

Of course, since 1940 all raw materials gathered here were stopped, while on the other hand, imports from abroad had become impossible, so that the French North African firms could neither send their products to their customers abroad, nor receive the perfumes they wanted. Under these conditions they decided to make their own perfumes on the spot; I might add that their attempts proved successful beyond prevision. At the present time a buyer can get the very cosmetic he wants at any hairdresser, or in any beauty salon. . . . One may affirm that no young man here is likely to look like the unfortunate Traddles, David Copperfield's friend, who, when the latter went in his company to the house of Dora's aunts to ask in marriage the 'most beautiful girl in the world', could not, at the despair of the to-be-husband, get his hair but upright, in a perfect disorder. The Algerian housewives often complain about the scarcity of alimentary goods on the market, none, as yet, has complained of the shortage of beauty products, such as eau de cologne, lipsticks, and other products which are rightly supposed to be needful to the toilet of a woman.

### CHIEF FIRMS IN ALGERIA

There are three large firms in Algeria manufacturing alcoholic perfumes: Azurville, Floreal and the Chatelaine. The two former companies are located in Algeria, and the Chatelaine is at Boufarik, a small French town about 38 kilometers distant from Algeria. The main firm making cosmetics and products is Floreal, which, as is also true of Azurville and La Chatelaine, manufactures all its own products. In spite of big difficulties they are able to produce, among other products, eau de cologne, powder, beauty creams, shaving creams, lipsticks. These lipsticks are manufactured complete to lacs and colorings. All these products are made in spite of a total lack of stearin, glycerine, mineral oils, fish oils (whale), greasy matters and alkalis (potassium soda and caustic potassium).

Likewise the cosmetic branch would be still more flourishing if there were talc, starch, magnesa carbonate, oxigenized water, zinc oxide, colorings and antiseptics. But for all that, our perfumers can scarcely meet the local demands, aside from those of Algeria, Morocco, Tunisia, and those from French West Africa and French East Africa.

### PACKAGING PROBLEMS

As great as they are, the difficulties just mentioned prove a minor handicap compared with the almost complete lack of packing, metal tubes, flasks, cardboards for packing, beautiful paper for labels, and so on. For instance, as one example, among hundreds, powder is sold in small sacks of ordinary paper. It does not matter that the contents is better than the container.

In peace time, perfumes were, as a rule, sold for the most part in small fancy bottles, containing two or three centilitres, packed by the dozen in cardboard boxes. Also, bottles of 6 to 15 centilitres, and in the case of eau de cologne, up to 50 centilitres or 1 litre, were in demand. Brilliantine, pomade vaseline, and other similar products, were sold in glasses or China pots, generally speaking containing 125 to 250 grammes. Today, most deluxe and fancy bottles, and China pots as well, have disappeared from the North African market. Instead, occasional bottles and tubes of every shape are used. One firm is compelled to sell the greatest part of its eau de cologne in beer bottles handed to it by Canadian troops on duty here, and received by them direct from Canada.

Now, if the three outstanding manufacturers of perfumes and beauty products can scarcely supply their customers—both wholesalers and re-

**TEST THIS NEW AND IMPROVED PRODUCT**

# DOW PROPYLENE GLYCOL, N.F.

## IT'S READY TO SERVE YOU WELL

Recently perfected by Dow research, the new Propylene Glycol possesses excellent characteristics of odor and taste. Its purity makes it exceptionally well suited to use in many products taken orally—and to a variety of other formulations requiring high standards. To insure the same high state of product purity on arrival as when it leaves the manufacturer, Dow has developed a new, distinctive container—resin-lined to eliminate contact with metal. Propylene Glycol is a clear, colorless, viscous liquid with a faintly sweet odor and taste. It is miscible with a wide range of solvents: water, chloroform, acetone, alcohol, and many other organic liquids; and it acts as a mutual solvent for oil-soluble and water-soluble materials. The new Dow Propylene Glycol is ready to serve, and serve well, the manufacturer who can reap the benefits afforded by its unique properties as a combination preservative, flavor extender, plasticizer, and hygroscopic, softening and moistening agent.

**THE DOW CHEMICAL COMPANY**
**MIDLAND, MICHIGAN**

New York • Boston • Philadelphia • Washington • Cleveland • Detroit • Chicago
St. Louis • Houston • San Francisco • Los Angeles • Seattle

**TO THE COSMETIC INDUSTRY**

Dow Propylene Glycol, N.F., offers characteristics of purity and quality which make it especially valuable as a penetrant, soothing and softening agent, and as a mutual solvent for use in lotions, water creams, liquid face powders, jellies, lip rouge, nail polishes and other cosmetic products. As a humectant, emollient, solvent, carrier, and preservative, this Dow product is ready to serve in a variety of applications.

***Interesting, Factual Data***

Data that may well suggest profitable applications for Dow Propylene Glycol in your business are contained in a special Dow booklet. Physical data, charts and other technical information are also included in this booklet. Dow will be glad to send you a copy.

DOW

**CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY**

Gathering Oranges in Boufarik

El Golea, oasis of the Algerian Taharan

tailers—it is because they are the only manufacturers not only in Algeria, but also in the whole of French North Africa and the French Black Continent. As a rule such goods as eau de cologne, brilliantine and other lotions are exported to Morocco, Tunisia and to Black Africa in wine barrels containing 200 to 400 litres. So is it likewise true with liquids used for water waves, which liquids, it is worth pointing out, are the most in demand. Up to 1940, French West and East Africa were supplied with perfumes from France (Paris) and also from England. At present ships import foodstuffs to Algerian, Moroccan and Tunisian ports take as freight on their return trip, wine, tobacco and perfumes. Only the alcoholic products pay a tax on entry, at least to Morocco and Tunisia. Generally such products are shipped in bulk, and upon arrival are packed into bottles, tubes or boxes by the buyers, or sold by weight in shops. This last way of selling is also taking place in Algiers.

### CHEMICAL PRODUCTS NEEDED

Of course, many things are lacking for the Algerian manufacturer which would make his perfumes and beauty products more nearly perfect. Among these matters are chemical products, synthetic essences, "fixators," bergamot, vanillin, heliotropin, oak moss, etc.

Perfumers here would be disposed to send to the United States essential essences to be found here, such as geranium, rosemary, mint, orange of Guinea, lemon, Grasse oils, mineral oils, and above all, wine alcohol, which are in such large quantities in Algeria. These exports would establish credits for merchandise urgently needed here. The most urgently needed products here are machinery and equipment. The representatives in Algeria of the great French firms would be glad to get in close touch with the principal American firms, so that for their mutual benefit an association may be formed, to be developed after the end of the war. Undoubtedly, the Algerian perfumery industry could be greatly improved with the help of America.

### NO AMERICAN FIRM HERE

There is no American firm manufacturing in Algeria, and as a rule in the whole of French North Africa. Elizabeth Arden, who has several branches here, the main one of which is in Algiers, is fully, or rather was before 1940, fully dependent upon her mother branch at Paris. This is also true with Helena Rubinstein. Both sell beauty and toilet products, with their customers application, and from demonstration salons.

### U.S. COOPERATION NEEDED

This is the history of the making and sale of the Algerian perfume industry. That history began, at least as much as the sale of it is concerned, about twenty years ago. Since 1940 it has improved more and more, but as said above, wants now the help of America to improve still more. If such help can be obtained—in an administrative way as well as in a professional one—it will mean the beginning of real accomplishment in Algiers, Morocco and Tunisia.

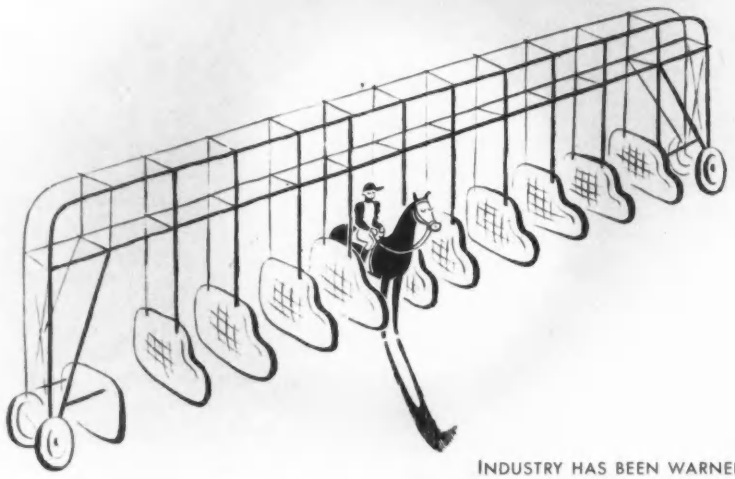
### Isopropyl Alcohol Available

Elmer Tysdal has unexpectedly announced that the WPB will allocate for July, 25 per cent of civilian demand of 91 per cent isopropyl alcohol. This is the first allocation since last November. The industry has been urged not to inflate applications, and to keep requests down as much as possible. The filing of exorbitant claims will assure that there will be no more immediate supply, otherwise more alcohol will probably be available.

**Calcium Pantothenate and p-Aminobenzoic Acid—Effect of, on the Gray Hair of Humans.** Harold Brandaleone, Elizabeth Main and J. Murray Steele. *Proc. Soc. Exptl. Biol. Med.*, **53**, *47, 1943.*—In a group of 19 elderly individuals with gray hair, a significant color change during a period of intensive vitamin therapy was noted in only two cases. These subjects received calcium pantothenate and p-aminobenzoic acid together with brewers' yeast. Both were men. Some questionable changes were noted when one or the other drug was given alone. (Through *J. A. Ph. A.* **33**, *5, 1944.*)

**Cosmetic Compositions Intercepting Light of Short Wave Length Such as Ultraviolet Light.** U. S. 2,327,899. A polyhydroxy alcohol such as ethylene glycol or triethylene glycol, mono-substituted with p-aminobenzoic acid, is used (suitably in a dilute alcohol solution) and is of neutral action toward nerve endings near the surface of the skin.

# DONT BE LEFT AT THE POST-WAR PLANNING



INDUSTRY HAS BEEN WARNED by Jesse Jones, U. S. Secretary of Commerce, that the war may end suddenly and business should, therefore, be preparing now for the Post-war period.

The Committee for Economic Development reports that cessation of hostilities in Europe will release 80% of the nation's war production capacity for reconversion for civilian use.

Mr. Jones' warning and the report of the Committee for Economic Development should serve as a double spur to all Post-war thinking. When restrictions are lifted from war-prioritied cosmetic ingredients, don't be caught flat-footed and left at the post.

The merchandising, packaging and production experience and facilities of Allied Products may be a source of guidance at this time for the all-important, fast get-away and quick sales pick-up when war production barriers are raised. Arrangements for consultation can be made at your convenience, and without obligation, at your office or at the Allied Office in the R.C.A. Building in New York City.

**ALLIED PRODUCTS INC.**

30 ROCKEFELLER PLAZA, N.Y.C.

PRIVATE BRAND SPECIALISTS • MAKERS OF THE WORLD'S FINEST COSMETICS AND TOILETRIES

Plant and laboratories • Suffern, New York • 1015 St. Alexander St., Montreal, Quebec

it is ideal and desirable for summer wear or in warm climates and by the younger girls, especially if it can be made perspiration-proof.

Non-alcoholic, milky hair dressings that have found their way into the market during the alcohol shortage are here to stay. Men who like the tingling sensation of strong alcoholic products will probably continue to use such preparations, but there are many men who prefer either a midly or non-alcoholic dressing. Furthermore, there is a sizable market among women who seem to take quite a fancy to the non-alcoholic products. The success of emulsified hair dressing in England and Continental Europe is testimony to their possible universal acceptance.

### COLD PERMANENT WAVING PREPARATIONS

The waving of hair without the aid of external heat is one of the recent major scientific achievements made by the toilet goods industry. Cold waving had its foundation years ago in the texile field, but it took a long time to reach perfection. In fact, the use of reducing agents such as thioglycollates to alter the physical appearance of hair keratin by changing its chemical structure, goes back to around 1905. As a result, there is nothing new about cold waving except to work out the details.

### THEORY OF COLD HAIR WAVING

Reducing agents as a group will produce a permanent wave without the aid of externally applied heat, but some are more effective than others. Substances producing *RSH* or *RSOH* groups with keratin have the greatest desirability since these groups take part in the process of rebuilding new linkages after hydrolysis.

The *RSSR* or disulfide linkage of cystine is the key to any hair waving process, cold or otherwise. It must be broken first, then reformed into another association to effect a permanent wave.

Since the *RSH* junction is so important, any ingredient that can produce the maximum of these groups per unit used, is the most desirable. Only thioglycollates and certain mercaptans can reduce the disulfide link to two sulfhydryl groups. That is why thioglycollates are so widely used in cold waving solutions, although other compounds have been and may be used.

After the use of a thioglycollate solution, the hair is treated with oxidizing and/or acidic substance to convert the sulfhydryl links so formed back to disulfide, but between different so-called polypeptid chains.

That is all there is to the cold waving process as it is practiced in beauty shops. Another type of safer cold waving is done at home utilizing well known, simple reducing agents and alkalis. It takes many hours to effect any degree of waving; such waves are not long lasting. The home permanent wave must be easier to perform with longer lasting waves before it ever becomes a threat to the beauty shop.

Having established the theoretical considerations for cold waving, the next step is to put them to practical use. Analysis of existing cold waving solutions for direct application discloses the presence of from 4 to 8 per cent of thioglycollate, depending on the fineness and condition of the hair. The titrable alkalinity is equivalent to about 2 per cent ammonia. The pH is usually between 9 and 10. The circulation solutions contain near 10 per cent of alkanolamine thioglycollate. Both kinds contain a little wetting agent to aid in penetrating hair. Thioglycollates are affected by traces of metal and other compounds. Many solutions are not stabilized and hence oxidize before they are used. Some solutions possess a strong odor of hydrogen sulfide, others have a deep magenta color. Some irritate the operator's hands more than others. A good product should be practically colorless, with but a faint characteristic odor, containing a buffer to protect the operator's fingers.

In the direct application method the sodium, potassium and ammonium thioglycollates are preferred. For the circulation method, the ammonium and alkanolamine derivatives work best.

The hair has to be washed free of insoluble soap residues, leaving it as free of fat or oil as possible, or in use, the cold waving solution will simply roll off the hair. Synthetic detergents or soapless foaming shampoos are ideal for this purpose. In my experience, pretreating solutions are the cause of many failures. After the test curl, the rest of the curls are best wetted all at once and the reaction is allowed to continue (while the head is covered) the length of time required for the test curl. The reaction is stopped with one of many mixtures. Peroxide and acetic acid are best known although citric or trataric acids, sodium chloride, chlorate and iodate are also used. The hair is washed and the wave set. No heaters or electric wires! No heavy metal curlers, for wood rods are used in the cold method. The hair has a very nice feel when taken off the rods. Note this difference, however, fine hair waves easier than coarse hair.

Now that it is worked out, the cold method is getting excellent consumer acceptance. It is doubtful if straight heat methods will survive long.

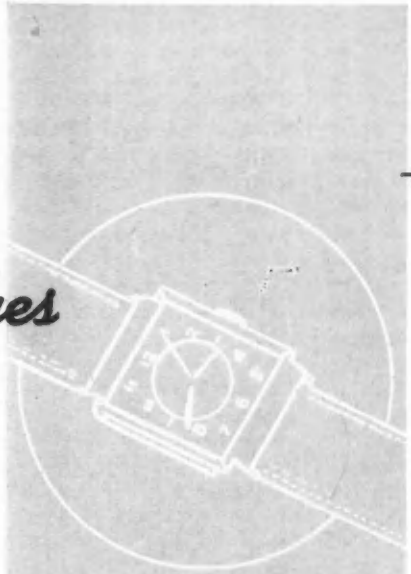
### MAKE-UP

Cosmetic Surveys show that a large percentage of women use make-up. That is as it should be. For after all is said, a cosmetic can do no more than *produce* the *illusion* of beauty. It is impossible to make a person beautiful, but by the artistic use of cosmetics, an *appearance of beauty* can be achieved. Make-up, more than any other of the host of cosmetics, can produce the *illusion* of beauty. That is why make-up is getting more attention from cosmetic technicians.

Make-up will be constantly in a state of flux because it is more susceptible to style changes. Cake make-up is an example. It was on the market quite a number of years before it achieved any degree of popularity. At that time the shiny appearance was in vogue. Cake make-up had to wait its turn. Yet cake make-up has many disadvantages. It is messy to apply. Water must be available. It is difficult to get a smooth, even application. The make-up was intended for photographic effect. It is too dull for social use, making the wearer's face look almost deathlike because of its absolute absence of sheen, and sheen is always present in a youthful skin. The skin feels taut and stretched from its use. Some say it causes large pores or breaking-out of the skin. Besides, cake make-up is difficult to make. It cracks and chips in shipment. It is susceptible to the

CINCINNATI CRAFTSMEN MAKE WORLD-FAMOUS

*Watches*

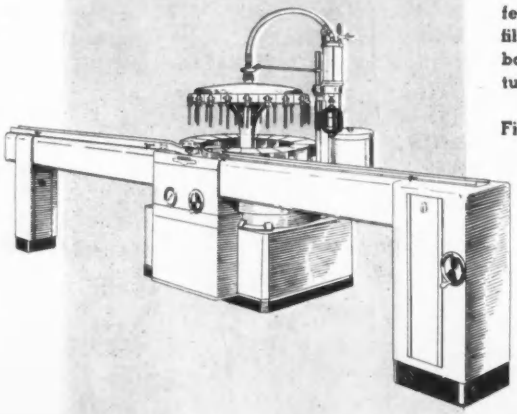


It requires a skilled hand to form the delicate beating heart of a fine timepiece. Cincinnati craftsmen possess this talent in abundant measure.

CINCINNATI CRAFTSMEN MAKE WORLD-FAMOUS

*Kiefer Filling Machines*

For generations the handiwork of Cincinnati craftsmen has fully manifested itself in many avenues including the building of precision machinery. True artisans have for years given of their skill in the construction of Kiefer bottling and packaging equipment.



Completely automatic, semi-automatic, hand-fed equipment to clean, fill, close, convey jars, bottles, tins, collapsible tubes.

●

Filters Pumps Percolators

THE KARL KIEFER MACHINE CO.

New York
Boston
Chicago

CINCINNATI, U. S. A.

San Francisco
Seattle
Los Angeles

London, England

whims of humidity changes. It requires special machinery and complex handling.

But cake make-up has advantages too. It is a compact item, taking up little space. It stays on well, once it is applied. It is less susceptible to changing in warm weather. Maximum tinctorial power is obtained from the pigments used. It has greater covering power and hence covers blemishes more completely. Special colors are used to achieve an interesting make-up.

Fundamentally, there is little that is new in cake make-up too. Cake powder and rouge are but slightly different. Actually a granulation of ordinary powder is made with an emulsion instead of water. It is dried and compressed into cakes. The pigments tint more deeply. The mass acquires water wetting properties and adhesiveness from the same ingredients. Yet the high degree of sheen produced by talc in powder is practically absent in cake make-up because of the coating of fat on it—like the dull appearance of hair coated with insoluble hard water soap residues. Inasmuch as it is put on wet, the application adheres better.

To the compounder, the following are the essential ingredients:

| | |
|---|---|
| Covering Agent | up to 50% |
| Color Lakes | up to 2% |
| Filler | up to 80% |
| Plasticizer | up to 13% |
| Fats & Waxes | up to 10% |
| Binder, Perfume & Preservative | q.s. |

### FACE POWDER

During the last 25 years, face powder formulation and manufacture has seen advances too. The first was to give up the doctrine that *any* white pigment was usable whether safe or not. The second came about a decade later when face powder became considered as a paint. Its tinting and hiding power were put on a more rational basis; simplification of formulas followed to give proper hiding power, adhesion and slip. Other properties were later added. It became established that a powder needed but four ingredients, namely, covering agent, filler or slip producer, adhesive and perfume carrier.

Still, with this supposedly well fixed composition of face powder, a lot of products on the market today have not been simplified and modernized as much as possible. Starch would probably still be used widely—if available—had it not been for the starch test one large American manufacturer advised women to perform on the powder they were using. Somewhat later, the same manufacturer made the whole world conscious of the bite test for grittiness. Then came air-spinning and windmilling.

Face powder was and continues to be a *trick* product to make. This will probably always hold true for any product based on color effects. For while the box tone of a powder may be one shade, the resulting skin tone may be an entirely different shade. It will be found for example, that you can get a definite box tone but a much pinker skin tone if you follow a certain order of mixing the ingredients. Also, if the colors are pulverized with say a stearate or a stearate coated chalk you will get a greater safety from color bleeding. The use of say 1 per cent of mineral oil will give greater apparent color with less actual color being used in the powder. However, make sure that the entire mass is wetted with the oil.

### EMULSIFIED CREAMS & LOTIONS

While the glycerine and glycol fatty acid esters are firmly entrenched as oil-in-water emulsifiers, we have worked with emulsifiers of an entirely new type that possess advantages over the glycol and glycerol fatty esters. At the moment they are sold under trade names for *essential uses*. Some day their chemical composition may be divulged.

As for the water-in-oil type, it looks like the lanoline absorption bases are in for considerable competition. There was a time when no other kind of water-in-oil emulsifier was available. But that time is past.

### MISCELLANEOUS ADVANCES

Shampoos will benefit from the wide use of Army & Navy all purpose soap, a mixture of soap and wetting agent that foams and cleans in all kinds of water. Shaving creams too will profit from the formulation of all purpose soap.

Solubilizers for perfume and flavor oils will be in still wider use. In an emergency they can replace alcohol as a perfume solvent, but they work best when combined with some alcohol.

Suntan products will gain from the stiff requirements for such products laid down by the Military, resulting in better protection for the user.

New buffers as well as new antiperspirant ingredients will be ready to make their debut after the war, if not sooner.

### PRODUCTION CONTROL

Owing to participation in production for the Military, cosmetic manufacturers have been called upon for greater production control and analysis of finished products to be sure that the manufactured commodity met all of the military specifications. Naturally, many manufacturers who considered control and analysis as a luxury have suddenly discovered that it is an essential part of their business to know the composition, physical appearance and behavior of their products, as well as performance in use, before they are offered for sale. This new trend has been growing within the industry, and consequently there is going to be more need for cosmetic technicians with a sound scientific background. It is quite obvious to anyone associated with cosmetics that the best all around training for a cosmetic technician is a pharmaceutical education, for actually cosmetics and drugs are both branches of pharmacy. In cosmetic practice, the pharmaceutical art reaches it's highest point of perfection. The pharmacist's knowledge of physiology, bacteriology, therapeutics and compounding gives him a tremendous edge over an ordinary chemist when it comes to cosmetic manufacture. It follows then, that pharmacy schools should so align their curricula to give their students a sound training in basic pharmacy together with special training in cosmetc formulation, manufacture, production control and analysis.

Within the United States there are a number of pharmacy schools that have taught various types of cosmetic courses. None of the schools, however, have been properly organized to give a sound training in basic cosmetic science. There is afoot already a program to offer special training that may lead to the degree of, say, Bachelor of Science in Cosmetics.

NAUGATUCK

# Survey Relating to the Purchase of Soap

*Detailed picture of product preferences . . . Shopping habits and living trends under wartime restrictions in the shopping district of Milwaukee, Wisconsin*

from THE MILWAUKEE JOURNAL

A SHARP decrease is noted in the total number of brands of soap products used for household laundry this year. From 121 brands reported by Greater Milwaukee housewives in 1943, the number has declined to 89.

### LAUNDRY SOAP

Among all brands of soap products used for household laundry, Fels Naptha bar soap takes first place with a preference of 21.6 per cent, representing the purchases of 48,684 families. Independent grocery store distribution on Fels Naptha and other white or brown laundry soaps was not taken this year.

Oxydol is listed next with a gain in preference from 17.5 per cent to 18.5 per cent. This brand is offered for sale in 88.4 per cent of the city's independent grocery stores, and the stores of grocery chains.

Rinso appears with a gain in popularity from 14.3 per cent in 1943 to 15.5 per cent in 1944. Rinso was found in 87.5 per cent of the stores checked this year, and in the stores of the grocery chains.

Duz climbed to fourth place in the chart by virtue of a substantial increase from 8.7 per cent in 1943 to 11.6 in 1944. Independent grocery store distribution on Duz is 87.5 per cent this year. Duz may also be purchased in the A. & P. food stores and National Tea stores.

John Hanser's and P. & G. bar soap appear in the chart in this order with preferences of 11 per cent and 10.6 per cent, respectively. Other brands are listed in this order: Super Suds, Crystal White Bar, Ivory Bar, American Family Bar, Fels Naptha Flakes, Ivory Flakes and Swan.

The "miscellaneous" classification includes 76 different brands of soap products with a combined consumer popularity of 7.7 per cent.

### SOAP FOR DISHES

Ninety-eight different brands of soap products were reported in use for dishes this year compared with 106 brands a year ago and 130 brands in 1942.

Ivory bar soap continues to hold the No. 1 position, with a gain in preference from 22.4 per cent in 1943 to 23.3 per cent in 1944. Ivory bar soap was found in 87.9 per cent of the independent grocery stores this year, and in the stores of both grocery chains.

Duz is in second place, being preferred by 11.9 per cent of all families who buy soap products for dishes, as compared with 10 per cent in 1943 and only 7.7 per cent in 1942. Independent stores distribution on Duz is 87.5 per cent this year. Duz may also be purchased in the stores of both grocery chains.

Third place goes to Ivory Flakes with a gain in preference from 8.7 per cent to 10.3 per cent. Ivory Flakes is offered for sale in three out of four independent grocery stores, and in the A. & P. food stores and the National Tea food stores.

Rinso appeared next with a popularity of 9.6 per cent, as compared with 8.5 per cent a year ago, while Oxydol was 8.2 per cent this year as compared with 8 per cent in 1943.

Other brands are listed in this order: Swan, Lux Flakes, John Han-

# Extase

AN ALLURING FRAGRANCE RICH IN THE WARMTH AND DEPTH WHICH ONLY FINE NATURAL MATERIALS IMPART.

ORIGINAL IN CHARACTER, SUPREME IN ACHIEVEMENT

## COMPAGNIE PARENTO

INCORPORATED

CROTON • ON • HUDSON, NEW YORK

NEW YORK • CHICAGO • DETROIT • LOS ANGELES • SAN FRANCISCO

SEATTLE • PHILADELPHIA • TORONTO • MONTREAL • LONDON, ENGLAND

ser's Dreft, Ivory Snow, Super Suds, P. & G. Bar, White Sail Flakes and Crystal White.

Included under the "miscellaneous" classification are 84 different brands of soap products with a combined consumer preference of 9.6 per cent. No one of these brands has an individual popularity of even 1 per cent.

### FINE FABRICS SOAP

Among all brands of soap products used for fine fabrics, Lux Flakes takes first place, with approximately the same popularity that was recorded a year ago, 43.8 per cent of all buyers. This represents the purchases of 98,720 families. Lux Flakes was found in 80.4 per cent of all independent grocery stores, and in the stores of both grocery chains.

Second place goes to Ivory Flakes with a preference of 20.1 per cent this year as compared with 23.8 per cent a year ago and 18.5 per cent in 1942. Independent grocery store distribution on this brand is 77.3 per cent. Ivory Flakes may also be purchased in the A. & P. stores and the National Tea stores.

Ivory Bar is listed next, being preferred by 10.8 per cent of all buyers this year as compared with 11.5 per cent a year ago. Independent grocery store distribution on Ivory Bar Soap is 87.9 per cent. This brand is also offered at both grocery chains.

Ivory Snow and Dreft appear next in this order with popularities of 9.5 per cent and 7.7 per cent, respectively. It is interesting to note that despite a gain in popularity, Dreft was available in only 8 per cent of the independent grocery stores checked this year. Dreft was also stocked by A. & P. stores and the National Tea stores.

Other brands appear in the chart in this order: Lux bar soap, Duz, Swan, John Hanser's, Rinso and Oxydol.

The remaining 60 brands are included under the "miscellaneous" heading with a combined consumer preference of 4.7 per cent, representing the purchases of 10,594 families.

### SOAP FOR THE BATH

This year 67 different brands of toilet soap for the bath were reported in use. Nine brands appear in the chart with popularities of 1 per cent or more.

First place among all brands of toilet soap for bath goes to Life Buoy, with a preference of 22.4 per cent this year as compared with 24 per cent one year ago. Life Buoy soap is offered for sale in 82.6 per cent of the independent grocery stores, 66 per cent of the independent drug stores and both grocery chains.

Ivory takes second place with a slight decline in preference from 19.7 per cent in 1943 to 18.6 per cent in 1944. Ivory was found in 87.9 per cent of the independent grocery stores this year, in 24 per cent of the independent drug stores and in both grocery chains.

Third place goes to Lux with a gain in popularity from 17.1 per cent in 1943 to 17.7 per cent in 1944. Sweetheart and Palmolive appear in the chart in this order with popularities of 14.8 per cent and 9.3 per cent, respectively.

Camay shows a gain in preference from 6.7 per cent in 1943 to 8.9 per cent in 1944, thus picking up more than 5,000 new users. This brand is offered for sale in 84.4 per cent of the independent grocery stores, 26 per cent of the independent drug stores and in the stores of both chain grocery stores.

Next in preference is Swan with 7.4 per cent of users. Swan is offered for sale in three out of four independent grocery stores and one out of five independent drug stores. Woodbury and Cashmere Bouquet appear with 2.9 per cent and 1.5, respectively. Both brands are distributed in two out of three independent drug stores.

Included under the "miscellaneous" heading are 58 brands of toilet soap for bath with a combined consumer popularity of 4 per cent.

### SOAP FOR HANDS AND FACE

First place among all brands of toilet soap for hands and face goes to Lux, with a preference of 24.5 per cent this year as compared with 26.4 per cent in 1943. Lux is the third place brand among those preferred for bath. Lux is offered for sale in 82.6 per cent of the independent grocery stores, 56 per cent of the independent drug stores and in both the chain grocery stores.

Sweetheart is in second place with a popularity of 19.3 per cent, representing the purchases of 43,369 buyers. A year ago Sweetheart was preferred by 20.9 per cent, or 45,483 buyers. Sweetheart soap may be purchased in 74.1 per cent of the independent grocery stores and in 19 per cent of the independent drug stores. Both grocery chains also stock Sweetheart.

Ivory moved up to third place with a gain in preference from 13.6 per cent in 1943 to 14.7 per cent in 1944. Palmolive and Camay appear in this order with preferences of 14 per cent and 12.3 per cent, respectively.

Woodbury is preferred by 5.9 per cent of all buyers this year as compared with a preference of 5.5 per cent in 1943. Swan and Life Buoy appear with preferences of 5.2 per cent each.

Cashmere Bouquet shows a gain from 1.1 per cent in 1943 to 1.9 per cent in 1944, while Gimbel's Hardwater appears for the first time with a preference of 1 per cent.

The remaining 81 brands are included under the "miscellaneous" heading with a combined consumer popularity of 4.3 per cent. No one of these brands has an individual popularity of even 1 per cent and thus none appears individually in the chart.

### BUYING TRENDS

It is interesting to note that the trend is strongly toward the concentration of the market to fewer manufacturers. In only one category does this picture reverse itself.

FINE FABRICS SOAP

| Year | Number |
|---|---|
| 1944 | 71 |
| 1943 | 79 |
| 1942 | 84 |

SOAP FOR THE BATH

| Year | Number |
|---|---|
| 1944 | 67 |
| 1943 | 74 |
| 1942 | 75 |

SOAP FOR HANDS AND FACE

| Year | Number |
|---|---|
| 1944 | 91 |
| 1943 | 87 |
| 1942 | 89 |

LAUNDRY SOAP

| Year | Number |
|---|---|
| 1944 | 89 |
| 1943 | 121 |
| 1942 | 125 |

SOAP FOR DISHES

| Year | Number |
|---|---|
| 1944 | 98 |
| 1943 | 106 |
| 1942 | 130 |

# schimmel fixoresins

**A complete line of resinous fixatives designed for use with their respective odor types.**

**Fixoresins provide lasting power and add to the outstanding characteristics of each odor complex.**

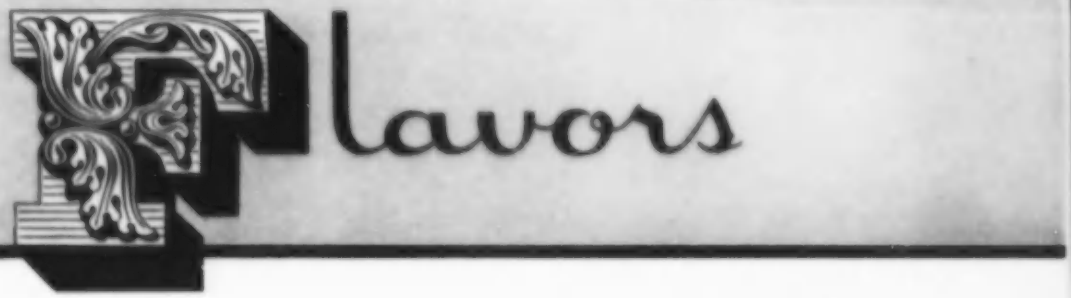
**They are inexpensive to use, do not discolor and are absolutely stable.**

***Other interesting fixatives are our:***

**Ambergris W artificial**
**Civet Paste W artificial**
**Colonfix**
**Animaline W artificial**
**Musearo W artificial**
**Resinoid Moussêne**

***Write us for assistance in your fixation problems***

**SCHIMMEL & CO., INC.**
**601 WEST 26TH ST.**
**NEW YORK 1, N. Y.**




# Oil of Peppermint—Storage Factors and Use of Antioxidants as Preservatives*

by L. H. BALDINGER,† N. K. ELLIS‡ and K. I. FAWCETT‡

IMPROPER storage of peppermint oil, the chief factor in the deterioration of this product, causes a darkening of the oil, as well as the production of an off-odor and resinous appearance. This paper includes a report of an investigation of storage conditions, experiments on the use of antioxidants for the preservation of the oil and a study of the combined effects of antioxidants and proper storage conditions.

### PRELIMINARY STORAGE EXPERIMENTS

In order to make a preliminary study of the effects of a few storage conditions encountered in the commercial production of mint oil, two samples of fresh mint oil were divided into portions early in the fall of 1937. Half of the portions were stored in an attic, which was subjected to temperature extremes similar to those encountered in storage by mint growers; the remaining portions were stored in a cool cellar. The containers for the oil samples included clear-glass bottles with cork stoppers, clear-glass bottles with corncobs as stoppers, tin cans with cork stoppers, and sealed tin cans. At various intervals during the following year of 1938—February, June, October—the storage samples were examined chemically and physically to determine the changes which had taken place.

The following points were observed for an examination of the data for these oils. The optical rotation increased slightly in those samples which were not protected from air, that is, in containers stoppered with corncobs or poorly stoppered with cork. No great differences were observed for this constant between cool-storage and attic-storage conditions. Ester and menthol values showed great apparent increases under poor storage conditions particularly in tin cans with cork stoppers and in glass bottles with corncob stoppers. It should be emphasized that the increase in ester and menthol contents is only apparent. Inasmuch as the calculation of the content of each of these constituents is based upon the amount of potassium hydroxide used in the assay, the formation of any compounds which will also react with this base will cause an erroneously high result in the estimation of the active constituent. It is believed that in the oxidative changes, which take place under poor storage, resins are formed which cause a discoloration of the oil, and which have been shown to react with potassium hydroxide. The apparent increase in menthol and ester content serves to indicate, therefore, relative amounts of resins and to classify roughly storage conditions. Menthone contents increased slightly, but not in proportion to the menthol and ester contents. All samples showing increased physical or chemical constants had darkened upon standing and were definitely substandard at the end of the storage period. Storage samples in glass bottles, tightly stoppered with cork, or in sealed cans, either in cool storage or in an attic, showed minimum changes.

### ANTIOXIDANTS EXPERIMENTS

In order to investigate the effect of antioxidants in the storage of peppermint oil, preliminary work involved the aeration of several oil samples to which different antioxi-

*This manuscript was prepared in connection with Peppermint Oil investigations conducted by the Purdue University Agricultural Experiment Station. For a detailed report of these investigations see Purdue University Agricultural Experiment Station Bulletin No. 461, "A Study of Some of the Factors Affecting the Yield and Market Quality of Peppermint Oil," Purdue University, Lafayette, Ind.

†Department of Chemistry, University of Notre Dame, Ind.

‡Department of Horticulture, Purdue University, Lafayette, Ind.

## *There is no "Synthetic" for*

# *EXPERIENCE!*

**Developing with the growth and the progress of the industry the past few decades, the A. C. Drury organization has been a prime factor in the distribution of raw materials and essential oils for the cosmetic, perfume and soap trades.**

**It is natural that we know what manufacturers in our industrial scope need and can use.**

Likewise, over the years we have enjoyed the best and most reliable connections both in America and abroad and have acquired an intricate knowledge of where to secure these materials and specialties, which is valuable to our customers, particularly in the present uncertain market.

That we have been successful in our operations is due largely to the fact that many of our customers regard us as a part of their organization. They give us their confidence—tell us their problems and just what item or items they lack, etc.

In fact, some regard us as their special purchasing agent. We welcome that relationship. It puts us to a test and results have been many times mutually helpful and profitable. Those we serve know this. Perhaps we may be able to serve *you*.

★

**Gums and Vanillas**

*For 85 years*

THURSTON & BRAIDICH
NEW YORK

Specialties
Gum Arabic—Gum Karaya
Gum Tragacanth—Vanilla
Beans—Tonka Beans.

★

**Talc**

*Oldest and largest in U.S.A.*

SIERRA TALC CO.
LOS ANGELES, CALIF.

Sierra Talcs approximate the ideal—chemically and physically—and excel in uniformity of milling and color.

★

**LACO Castile Soap**

*Made with 100% Pure Imported Olive Oil*

LACO PRODUCTS, INC.
BOSTON • NEW YORK

Manufacturers and Importers
Castile Soap U.S.P. "Laco"
Powdered—"Purls"—Bars

★

**Precipitated Chalk**

*Sturge's "Sturgeon Brand" leads the world*

H. J. BAKER AND BRO.
NEW YORK

Sturge's English precipitated chalk
U.S.P. Extra light—Dense.

★

**Bees-Wax**

*Since 1852*

THEODOR LEONHARD WAX CO.
*Established 1852*
HALEDON, PATERSON, N. J.

Bleachers, & Refiners of Bees-Wax.
White Bleached Bees-Wax
T. L. Brand. Extra Quality—
U.S.P. and 100% Pure.

★

**Stearic Acid**

*Superiority founded on performance*

THE HARKNESS & COWING CO.
CINCINNATI, OHIO

Manufacturers of Stearic Acid
Saponification Process.

★

**Medicinal White Oils**

*Qualities Unsurpassed*

THE ATLANTIC REFINING CO.
PHILADELPHIA, PA.
260 South Broad St.

Petroleum Products
White Mineral Oils U.S.P. for pharmaceutical and cosmetic uses.
All gravities, all viscosities

★

# A. C. DRURY & CO., INC.

219 EAST NORTH WATER STREET • CHICAGO, ILLINOIS

dants had been added, and subsequent analysis of the samples. Another group of protected samples was stored in sunlight for 6 months and subsequently analyzed.

Admittedly, the use of antioxidants as a substitute for proper storage conditions should be discouraged, but the effects of very small quantities of these substances suggests the possibilities of their use when proper storage conditions are not available.

The use of antioxidants in fixed oils is quite common (1) and it would seem that equally good effects could result from their use in essential oils. In choosing antioxidants for use by producers of peppermint oil, cheapness and accessibility are two important factors to be considered; for that reason, only a few of the more commonly used and cheaper antioxidants were tried, *a*-naphthol, hydroquinone, catechol, pyrogallol and tartaric acid. The latter was included because of the common practice of mint oil producers in using this material for decolorizing purposes. The aeration procedure was relatively simple. Compressed air, about two bubbles per second, was forced through 60-ml. portions of the oil. Inasmuch as the bubbling jets were of different size, the aeration was not uniform in all samples. The data collected for these samples indicate that *a*-naphthol, hydroquinone, catechol and pyrogallol, in 0.1% concentration, are of value in inhibiting changes in this oil, changes which are indicated by apparent higher menthol and ester contents. Pyrogallol and *a*-naphthol are valueless because of the dark color imparted to the oil; tartaric acid does not serve to inhibit oxidation.

### STORAGE EXPERIMENTS

Aeration in the laboratory can only approximate the conditions under which some oil samples are stored. The preliminary work on the storage of mint oil under different conditions and in a variety of containers, and the effect of antioxidants on the aging of oils, was followed by supplementary experiments in which a series of samples was placed in storage in October, 1939, to show the combined effect of these factors.

In Tables I and II are tabulated the types of containers and treatment involved, also chemical and physical constants for the oil samples, as determined at various intervals. In this series of samples menthone determinations were omitted. No definite and reliable procedure for determining this component has been included in the Pharmacopœia; furthermore, in the case of previous storage samples on which menthone assays had been made, according to published methods (2), is was shown that changes in the oil samples with respect to this component parallel the other changes.

Table I.—Physical and Chemical Data for Samples of Peppermint Oil Stored in a Cool Cellar in Different Containers and Protected with Antioxidants[a]

| Type of Container and Treatment | Optical Rotation | | Refractive Index | | Esters, % | | Total Menthol, % | |
|---|---|---|---|---|---|---|---|---|
| | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 |
| Glass bottle, cork stopper | —21.9$^{25°}$ | —21.4$^{25°}$ | 1.4620$^{17°}$ | 1.4610$^{20°}$ | 7.3 | 11.7 | 45.8 | 49.6 |
| Glass bottle, corncob stopper | —21.8$^{25°}$ | —21.5$^{25°}$ | 1.4616$^{17°}$ | 1.4614$^{20°}$ | 7.7 | 11.9 | 45.8 | 50.7 |
| Tin can, cork stopper | —22.7$^{25°}$ | —22.5$^{25°}$ | 1.4620$^{17°}$ | 1.4600$^{20°}$ | 5.3 | 5.1 | 43.7 | 44.0 |
| Tin can, sealed | —23.2$^{25°}$ | —23.5$^{25°}$ | 1.4610$^{17°}$ | 1.4595$^{20°}$ | 4.0 | 4.0 | 42.9 | 43.1 |
| Glass bottle, cork stopper, 0.1% catechol | —23.5$^{25°}$ | —23.5$^{25°}$ | 1.4602$^{17°}$ | 1.4597$^{20°}$ | 4.9 | 4.2 | 43.3 | 42.4 |
| Glass bottle, corncob stopper, 0.1% catechol | —23.5$^{25°}$ | —23.8$^{25°}$ | 1.4610$^{17°}$ | 1.4598$^{20°}$ | 4.9 | 4.9 | 42.9 | 43.7 |
| Tin can, cork stopper, 0.1% catechol | —23.5$^{25°}$ | —23.7$^{25°}$ | 1.4608$^{17°}$ | 1.4596$^{20°}$ | 4.5 | 4.7 | 43.0 | 43.6 |
| Tin can, sealed, 0.1% catechol | —23.4$^{25°}$ | —23.6$^{25°}$ | 1.4611$^{17°}$ | 1.4597$^{20°}$ | 4.2 | 4.5 | 43.1 | 43.2 |
| Glass bottle, cork stopper, 0.1% hydroquinone | —23.5$^{25°}$ | —23.5$^{25°}$ | 1.4603$^{17°}$ | 1.4599$^{20°}$ | 4.9 | 4.9 | 43.0 | 42.8 |
| Glass bottle, corncob stopper, 0.1% hydroquinone | —23.5$^{25°}$ | —23.7$^{25°}$ | 1.4608$^{17°}$ | 1.4598$^{20°}$ | 4.8 | 4.9 | 43.0 | 43.5 |
| Tin can, cork stopper, 0.1% hydroquinone | —23.3$^{25°}$ | —23.7$^{25°}$ | 1.4609$^{17°}$ | 1.4595$^{20°}$ | 4.8 | 4.5 | 43.0 | 43.4 |
| Tin can, sealed, 0.1% hydroquinone | —23.4$^{25°}$ | —23.6$^{25°}$ | 1.4610$^{17°}$ | 1.4597$^{20°}$ | 4.4 | 4.6 | 43.1 | 43.4 |
| Tin can, sealed, stored in a refrigerator for entire storage period | —24.5$^{27°}$ | —23.6$^{25°}$ | 1.4617$^{17°}$ | 1.4595$^{20°}$ | 4.0 | 3.8 | 42.9 | 42.3 |

[a] The sample as originally analyzed in October, 1939, showed the following constants: Optical Rotation, —23.4 at 25° C.; Refractive Index 1.4577 at 24° C.; Esters, 4.0%; Total Menthol, 42.9%. Triplicate rechecks in August, 1940, of the original sample which had been stored in a tightly stoppered clear-glass bottle at room temperatures showed the following percentages of total menthol: 42.9, 42.9, 42.9, 42.9, 42.9, 43.0. One portion of the oil was acetylated with one-year-old acetic anhydride, another with two-months-old anhydride and the third with fresh acetic anhydride. These experiments were performed to determine if the age of the reagent would cause any variation in results.

Table II.—Physical and Chemical Data for Samples of Peppermint Oil Stored in an Attic in Different Containers and Protected with Antioxidants[a]

| Type of Container and Treatment | Optical Rotation | | Refractive Index | | Esters, % | | Total Menthol, % | |
|---|---|---|---|---|---|---|---|---|
| | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 | June, 1940 | Dec., 1940 |
| Glass bottle, cork stopper | —21.5$^{25°}$ | —20.6$^{25°}$ | 1.4617$^{17°}$ | 1.4618$^{20°}$ | 9.9 | 15.4 | 48.8 | 54.3 |
| Glass bottle, corncob stopper | —21.6$^{25°}$ | —20.3$^{25°}$ | 1.4616$^{17°}$ | 1.4622$^{20°}$ | 10.9 | 17.2 | 48.7 | 54.5 |
| Tin can, cork stopper | —21.4$^{25°}$ | —21.0$^{25°}$ | 1.4610$^{17°}$ | 1.4600$^{20°}$ | 5.3 | 5.1 | 43.7 | 44.0 |
| Tin can, sealed | —23.4$^{25°}$ | —23.7$^{25°}$ | 1.4610$^{17°}$ | 1.4599$^{20°}$ | 3.7 | 4.0 | 43.3 | 42.8 |
| Glass bottle, cork stopper, 0.1% catechol | —23.4$^{25°}$ | —23.5$^{25°}$ | 1.4606$^{17°}$ | 1.4600$^{20°}$ | 4.5 | 5.0 | 43.5 | 44.1 |
| Glass bottle, corncob stopper, 0.1% catechol | —23.5$^{27°}$ | —23.5$^{25°}$ | 1.4606$^{17°}$ | 1.4600$^{20°}$ | 4.6 | 4.7 | 43.2 | 43.5 |
| Tin can, cork stopper, 0.1% catechol | —23.5$^{27°}$ | —23.7$^{25°}$ | 1.4607$^{17°}$ | 1.4600$^{20°}$ | 4.8 | 5.0 | 43.4 | 43.4 |
| Tin can, sealed, 0.1% catechol | —23.4$^{27°}$ | —23.6$^{25°}$ | 1.4604$^{17°}$ | 1.4598$^{20°}$ | 4.5 | 4.3 | 42.9 | 42.7 |
| Glass bottle, cork stopper, 0.1% hydroquinone | —23.5$^{25°}$ | —23.4$^{25°}$ | 1.4605$^{17°}$ | 1.4600$^{20°}$ | 4.9 | 4.8 | 43.6 | 43.3 |
| Glass bottle, corncob stopper, 0.1% hydroquinone | —23.5$^{25°}$ | —23.7$^{25°}$ | 1.4606$^{17°}$ | 1.4599$^{20°}$ | 4.8 | 4.7 | 43.0 | 43.3 |
| Tin can, cork stopper, 0.1% hydroquinone | —23.6$^{27°}$ | —23.6$^{25°}$ | 1.4608$^{17°}$ | 1.4599$^{20°}$ | 4.6 | 4.6 | 43.7 | 43.6 |
| Tin can, sealed, 0.1% hydroquinone | —23.4$^{27°}$ | —23.6$^{25°}$ | 1.4606$^{17°}$ | 1.4598$^{20°}$ | 4.2 | 4.4 | 43.4 | 43.3 |

[a] See Table I for data concerning the original sample, also for the control sample which was stored in a sealed tin can at refrigerator temperatures.

(*Continued on page 73*)

# WELCOME
## to Our New Home

Increasing business has compelled us to move to new and larger quarters at

**3 E. 44th St., New York, N. Y.**
**Telephone VAnderbilt 6-0981-2-3**

where our enlarged facilities will enable us to serve our many old customers more promptly, more efficiently and more completely.

Our new quarters are located in the heart of the midtown business section conveniently reached by all transportation lines. Ample space is provided for executive offices, for well equipped research and experimental laboratories and for the storage and shipping departments.

You are cordially invited to visit us in our new home.

PRESIDENT

# Gerard J. Danco, Inc.

**IMPORTERS AND MANUFACTURERS**

**Essential and Synthetic Oils, Chemicals, Drugs, etc.**

### ANALYTICAL PROCEDURES

The analyses of the samples included in this work were performed according to the methods of the Pharmacopoeia of the United States of America, Eleventh Revision, as listed under the monograph for Oil of Peppermint. One modification of the method is worthy of note. In the washing of the acetylated oil, hot water was used to decompose the excess anhydride and to remove acetic acid before subsequent washing with sodium carbonate test solution. The authors believe that this procedure has eliminated possible errors in the saponification of the acetylated sample due to undecomposed acetic anhydride and has made for more consistent results in checking analyses.

### DISCUSSION AND SUMMARY

If the per cent of menthol is used as a criterion upon which to base the efficiency of antioxidant action and to compare storage conditions, it has been observed that cool cellar storage is better than storage in an attic or in locations where extremes of temperature are likely.

In comparing the various types of containers, it is believed that the sealed tin is the most advantageous of the containers which were tested.

Catechol as an antioxidant in 0.1% concentration appears to be more effective than hydroquinone in maintaining the original menthol percentage. Perhaps the chief disadvantage in the use of either of these antioxidants is the slight coloration produced, especially in the older oils. This coloration is more noticeable in the case of hydroquinone-protected samples, much less pronounced in the catechol-protected samples and less noticeable for both antioxidants in the samples stored in corked bottles and sealed tins. The slight coloration is not accompanied by a resinous odor which is very noticeable in unprotected oils. The authors are reluctant to recommend the use of antioxidants except to those who are cognizant of the limitations of such agents for the preservation of easily oxidized material such as peppermint oil.

For the growers and producers, it is recommended, wherever feasible, that sealed containers, completely filled, be used for storing oil and that cool storage conditions be maintained at all times.

(1) Olcott, H. S., *J. Am. Chem. Soc.*, 56 (1934), 2492; French, R. B., Olcott, H. S., and Mattill, H. A., *Ind. Eng. Chem.*, 27 (1935), 724.
(2) Baldinger, L. H., *Proc. Indiana Acad. Sci.*, 52 (1943), 111.

*Journal of the American Pharmaceutical Association*, Feb., 1944.

*vanilla beans*
ALL VARIETIES
QUALITY FIRST
imported direct from all primary sources of supply
*M. Cortizas Co.*
1316 ARCH ST. • PHILADELPHIA, PA.
CABLE ADDRESS GALGICA
CODES BENTLEY'S SECOND PHRASE AND PRIVATE

**Prepared Lemon Beverage**

| | |
|---|---|
| Sugar | 64 lb. |
| Salt | 2 oz. |
| Powdered lemon juice | 2 lb. 8 oz. |
| Citric Acid | 1 lb. 8 oz. |
| California Lemon Oil | 2 oz. |
| Lemon Coloring | as desired |

Place 48 lb. of sugar, the salt, powdered lemon juice and citric acid (or substitute) in a mixing bowl and blend thoroughly. Blend the lemon oil and coloring with 16 lb. of sugar and add this to the first mixture. Put the entire mixture through a fine sieve. To serve, make up in the proportion of 1 lb. of mixture to 1 gal. or more of water. (Through *Food Ind.* **16**, *No. 3, 147, 1944.*)

*Have you a* **COLOR PROBLEM?**
LET US SOLVE IT!
F. D. & C. Certified Food Colors for Flavoring Extracts, Flavors and all other food products.
Eastern Representatives of Wm. J. Stange Co., Chicago, Ill.
*Also—*
D. & C. and Ext. D. & C. Colors for Perfumes, Soaps, Shampoos, Bath Salts, Toilet Preparation Compounds, Nail Polish, Wave-set, Permanent Wave Lotions and Cosmetic Stockings.
SAPONINE
*—the perfect foam producer*
CARMINE NO. 40
**LEEBEN CHEMICAL CO., Inc.**
Successors to H. LIEBER & CO., Inc.
389 Washington St., New York, Tel.: WAlker 5-0210-0211

# Duval

WE ARE

## Headquarters

FOR THE FOLLOWING

MENTHOL SYNTHETIC LIQUID NOT U.S.P.
OIL PEPPERMINT RECTIFIED U.S.P.
OIL PEPPERMINT CRYSTAL WHITE U.S.P.
(TRIPLE DISTILLED)
AND ALL OTHER
ESSENTIAL OILS
AROMATIC CHEMICALS
NATURAL FLOWER OILS
SYNTHETIC FLOWER OILS
MODERN and DISTINCTIVE
PERFUME BASES
DISTINCTIVE and CHARACTERISTIC
FLAVOR OILS and ESSENCES
PERFUMERS' TINCTURES
FIXATIVES (FOR PERFUMERS)
RESINOIDS
TERPENELESS and
EXTRA CONCENTRATED ESSENTIAL OILS
FLORAL WATERS OLEO RESINS
FRUIT ESTERS BALSAMS and GUM

Master Blenders of distinctive and original perfume oils, flavor oils, and essences.

We also specialize in the duplication of any perfume or flavor.

*Samples and prices gladly furnished on request.*

Representatives
Philadelphia, Pa. St. Louis, Mo.

## COMPAGNIE DUVAL

121-123 East 24th St., New York

DUVAL



# America's FINEST

POWCO BRAND Pulverized Neutral Soap, made from only the finest raw materials, laboratory controlled for uniformity of chemical and physical characteristics, and POWCO BRAND's wide experience in catering to the needs of dentifrice and cosmetic manufacturers are but two of the reasons why POWCO BRAND Pulverized Neutral Soap has helped to improve a long list of products.

Modern production methods and close selling margin make it possible for you to buy standardized air-floated POWCO BRAND Pulverized Neutral Soap to suit your needs—of better quality—at a saving.

**POWDERED NEUTRAL SOAP**

**JOHN POWELL & CO.**
*116 East 32nd Street,*
*New York City.*

by ARNOLD KRUCKMAN

THE Peppermint Allocation Order (W. F. O. 81) has been amended, effective June 30 (Amendment 2), to enable buyers to purchase up to 50% of their 1944 allocation quota before October 1.

The action was taken after the Peppermint Order Administrator, A. L. Kalish, made a trip into the field, and found that the farmers of the midwest, particularly in Michigan and Indiana, had generously complied with the Government request for an increased crop. The acreage has been materially expanded, and the indications are that the crop will be substantially larger than it was last year.

It is emphasized that those who acquire additional peppermint up to the permitted 50% should clearly realize that the relaxation does not entitle them to more peppermint oil for the entire quota year. The quota remains as it is, and those who purchase peppermint oil may not handle, for the year, more in the quantity they have used, or bought, *and what they may have on inventory*, than the permitted allocation.

### PURPOSE OF AMENDMENT

The chief purpose of the amendment to the Order is to permit those who need peppermint, or who wish to make the customary seasonal purchases, to do so before October 1. Under the Order, as it existed, further acquisitions would not have been possible until October. Apparently the chief beneficiaries will be the farmers, who are accustomed to sell some of their crops at this time, and those among the dealers who feel the need of making adjustments at present.

The dealer also is permitted to acquire, or have on hand, a supply, equivalent of needs for 90 days, for the use of the armed forces, lend-lease, or similar unrestricted Government customers. This is known as x-quota use.

### BRAZILIAN MINT OIL

Word also has come from the Bank of Brazil, the controlling Government agency, that export of Brazilian mint oil has been prohibited. The announcement explains the yield across the equator is required for the needs of domestic manufacturers. Obviously, it appears to be the plan to use the products of the mint oil for manufacturing in Brazil, and that the products of the oil, in their various forms, will be offered to us as competitive commodities, in whatever form they may be most necessary to us, and bring the greatest profit to our Latin-American neighbors.

Incidentally, some of the problems suggested by this action will unquestionably be on the agenda for discussion at the conference of Latin-American nations here in Washington in Fall. The Conference is the first general assembly called by the Pan-American Union for several years.

### CEILINGS ON NATURAL MENTHOL

Importers of natural menthol, who made contracts before April 17, 1944, at prices above the ceiling that went into effect on April 17, have been advised by OPA that they may secure special ceilings if they can show an irrevocable letter of credit established before April 17, based on a contract to buy natural menthol at $16.50 per pound in quantities of 500 pounds or more, and higher prices for smaller quantities. The ceiling now, for imported natural menthol, is $15.00 per pound, duty paid, F. O. B., U. S. port of entry. Applications for special ceilings must be made in writing to Export-Import Price Branch, OPA, Washington, D. C., and must show the date the shipment was purchased, price paid and terms of sale, total quantity received or expected, an itemized statement of all expenses, and a copy of the irrevocable letter of credit. The regulation is based on Amendment No. 1, Order No. 13, Maximum Import Price Regulation.

### ALUMINUM FOR THE INDUSTRY

Relaxation in the supply of aluminum, lately discussed by Donald Nelson, has apparently opened the way to an eventual supply of cans for dentifrices, denture powders, and similar products of the industry. The officials of Cosmetics Branch, and other parts of the Chemicals Bureau of WPB, have been leading in the effort to help the can manufacturers to secure a supply of aluminum sheets in order to conduct experiments. There is confidence that it will be possible to make aluminum cans, after the style of the familiar tin containers, within certain cost limits. It remains to be discovered if cans for low-priced wares can be made. The success of the attempt also depends upon the availability of the facilities to manufacture the cans. This again hinges upon manpower, which in turn is based upon the location of the facilities. Plants or establishments in No. 1 and 2 areas will not be able to secure the workers.

### VANILLA BEAN SITUATION

The bumper crop of vanilla beans predicted from Mexico has not quite materialized, although the crop is good. They expected 500,000 pounds cured beans and will have something below 350,000 pounds. The rains did not come, and flowers to be pollinated were greatly reduced, and the vines became weakened. However, the crop is an increase of 50% above the

yield of 1942. Government also tells us that the long expected vanilla beans from Madagascar are now finally released from Durban, South Africa, and with the 120 kilos of floral oils from North Africa for Shiras, are about to land in the United States. We also hear that Yardley is bringing a considerable volume of oils and other materials into Brazil and Mexico, which originated in Africa, or off the Coast of Africa. The materials, or part of them, are eventually expected to find their way into the United States, in their original form, or semi-processed. They tell us considerable gallonage of ethyl alcohol is coming through from Puerto Rico, as perfume, which in reality has about 5% perfume tincture, and 95% alcohol. When it arrives in this country it is said to be redistilled, the alcohol separated from the essential oil, and the alcohol used profitably in making perfumes, toilet waters, shaving lotions, and all the products requiring alcohol for toiletries. They know all about the proceedings here, but there is nothing they can do because the process is legal.

#### CACAO CROP OFF NORMAL

The cacao crop in Venezuela is off normal, the expectation being approximately 200,000 bags as against the normal 350,000. The news is important to us because we have purchased not less than 90% of the crop each year since 1939. The condition is reflected in the announcement by WFA that the present grinding quota of 80% for civilian use will be cut to 70% for the third quarter, covering all uses of cocoa and its products. WFA warns that there will be a further reduction for the fourth quarter. Grapefruit, and all products processed from grapefruit, will be easier. The Texas production of the original fruit has greatly increased. Those who failed to report beeswax from abroad by June 6, will not be permitted to accept it when it arrives at the port of entry, at least not without making a good showing for the omission. Under Order M-11-a, as amended on June 17, lead-free zinc oxide may be used in toilet soap.

U. S. Commercial Company, Mr. FEA Crowley's importing intermediary, is bringing 100 different materials and commodities from Latin-America, Africa, India, China, Australia, and various Pacific islands, there being oils, gums, and other materials and commodities of interest to the perfume and toiletries industry, among the 100. Those who export may now get space in ships for South Africa and East Africa by applying directly to American and British steamship lines. There is no increase in tonnage, and it still is necessary to secure the releases from the Supply or Purchasing Missions, but the new system is more simple, and approaches to some degree of the normal customs. Those who do business with them, no longer need to submit Import Recommendations in transactions that involve Mexico, Brazil, Colombia, Honduras, Costa Rica, Nicaragua, Dominican Republic, Panama, Ecuador, Paraguay, El Salvador, Peru, Guatemala, Uruguay, and Haiti.

#### SPECIAL ALLOCATION OF LANOLIN

A special allocation of lanolin will be made during July and August for delivery to cosmetic manufacturers. The quantity will be about the same as was provided for May and June. Rosin need no longer be added to soap, in amplified quantity, because rosin is scarcer, and fats are more plentiful. The regulation came in an amendment to WFO 86. Department of Agriculture reports inedible tallow and greases for the first three months of 1944 at 500,000,000 pounds, more than 34% greater than a year ago. WFO No. 67, amended in June, permits industrial users to accept delivery of inedible tallow and grease after July 1 by certifying its use directly to the supplier, without filing applications with WFA in Washington. Inedible tallow and grease is given on prior claim for all industrial uses except soap. The user must certify the material and that none of the quantity is used to make soap. Spain, this year, has produced 17,250 tons olive oil for industrial uses.

#### ALCOHOL CONTINUES TO BE SCARCE

WPB reports the production of 190 proof ethyl alcohol the first four months of 1944 reached the record rate of 192,200,000 gallons, but there is still none for industrial uses. All alcohol continues very scarce, and no relief is in sight, despite the fact that the distilleries of the nation were told to take a vacation for the whole month of August. Butyl alcohol also has been eliminated for all civilian needs, which reduces the supply of butyl acetate, used in the affairs of the cosmetics and toiletries industry. There is no isopropyl, except for military needs.

#### PRODUCTION OF CONTAINERS

Order L-239, covering production of paper containers, is still undergoing final touches in WPB. There is some very slight hope that it may finally be issued with the permission to produce a limited number of set boxes, in modified form, as programmed by the representations of Elmer Tysdal, Chief, Cosmetics Branch, before the Containers Division. The paper situation is so desperate that almost any feasible plan for conservation is greeted eagerly. The tentative allocation of pulpwood for set up boxboard, indicated June 27 by the WPB Pulp Allocation Office, was 1,076 tons; for folding boxboard, 118,543 tons. Packagers of gift cosmetics were notified they may use former discounts in pricing new gift sets after June 24, making a lower uniform retail price for gift cosmetic sets. To determine the retail price the packagers multiply the cost of the container plus 1.33 times the cost of the accessories by a mark-up factor equivalent to their largest trade discount. Authority is found in Amendment 5, MPR 393, Packaged Cosmetics, effective June 24. When the new OPA is validated by the President's approval it will be wise to study the section covering higher price lines limitations. This applies to retail sales, and is expected to have some modifying effects on over-all retail pricing. The law was passed in such confusion during the last days of the session, before adjournment for the Conventions, that the clarification must await the publication and analysis after the law is signed.

---

**Process for the Preparation of Higher Unsaturated Aliphatic Alcohols.** U. S. 2,332,834. A carrier supported hydrogenation catalyst for reducing unsaturated fatty acids to unsaturated alcohols, essentially contains copper and cadmium, the latter being present in the ratio of 15 to 55% of the former. (Through *Oil & Soap* 21, *30, 1944.*)

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

# U.S.I. CHEMICAL NEWS

July ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1944

## Non-Critical Resin Announced by U. S. I.

### S&W Arochem 348 Developed for Varnish Formulations with Soft Oils

Made entirely from non-critical raw materials, U. S. I.'s new synthetic resin, S&W Arochem 348, combines high melting point (obtained without the use of metals, phenol-formaldehyde, or dibasic acids) with the ability to aid in the bodying of "soft" oils. This combination facilitates the production of varnishes superior to ester gum varnishes, and appoaching the quality of modified phenolic or modified maleic varnishes.

**Higher Viscosities Obtainable**

Varnishes compounded with S&W Arochem 348, for example, are faster drying and have greater film hardness than comparable ester gum varnishes. They are freer from after-brittling and possess better elasticity, durability, and color retention. Varnishes of much higher viscosity can be obtained with Arochem 348 than with ester gum, when processed with dehydrated castor or similar oils. On the other hand, equivalent viscosities can be obtained with much less cooking. This means important savings in time, and varnishes of paler color.

Arochem 348 requires no special precautions or methods of handling; it is completely soluble even in very high-viscosity drying oils. Its specifications are as follows:

**Resin Specifications**

| | |
|---|---|
| Acid Value | 15–25 |
| Melting Point (Mercury Method) | 115–130°C |
| Color (G.H. 1933—50% Solution in Toluol) | 10–12 |
| Viscosity (G.H.—60% Solution in Toluol) | Approx. C |
| Specific Gravity | 1.1 |

## Holds Even Temperatures Using Ether as Coolant

An ingenious new heat exchange device cools liquids to pre-selected temperatures, and then holds them within narrow limits, according to a recent patent.

Taking advantage of the high volatility of ethyl ether, the new device provides for pre-selection of the temperature by adjustment of the pressure in the coolant chamber. Pressure is set to maintain the boiling point of the ether at the desired level. As the temperature rises above this level, evaporation of the ether accelerates so that a constant ratio is held between cooling needs and cooling effect.

## *Suggests Way to Better Blood Plasma Quality*

The possibility that the normal chemical balance of human blood can be more closely maintained, and the value of the resultant plasma still further improved, is suggested by two bacteriologists. They propose collecting and storing blood in an atmosphere of carbon dioxide and thus preventing the loss of $CO_2$ which occurs when blood is shed in air.

It is this loss of $CO_2$ which normally results in a gradual increase in the potassium ion concentration in the plasma, and other changes which adversely affect the plasma.

## TRAVELING CLOTHES FOR A P-40

"Wrapping up" planes or plasma, war's unusual packaging jobs call for—and get—unusual adhesives.

# Production Short Cuts Seen With War-Born Adhesives

### U. S. I. Solvents, Plasticizers and Resins Expected to Play Increasingly Important Roles as Essential Ingredients

Dating back comparatively few years to the introduction of cellophane, resin adhesives are the newcomers in a long line of chemicals employed in the vitally important job of "making things stick". As newcomers, they are currently the most interesting. Certainly they hold the greatest promise of future growth.

**Types of Glue**

Starch-base glues, because of their low cost and suitability for paper and other water-permeable materials, represent by far the largest volume of adhesive sales; doubtlessly they will continue as leaders in many packaging and paper-converting applications. Casein and latex glues have numerous accepted and important uses. Animal glues, while less significant volume-wise, continue to fill certain specific needs. However, it is in the resin adhesives, with their fast-setting properties and adaptability to a wide variety of materials, that the really fascinating postwar possibilities lie.

**Bundles for Beachheads**

"Amphibious" packaging of military supplies is strictly a war problem. But in the development of adhesives to provide water-proof seals, to adhere to the new water-proof papers, to withstand rough handling, to serve in tropic heat or arctic cold, advances of great peacetime promise have been made. The same is true in the development of plywood glues, which have revolutionized our ideas of wood as a structural material; of metal bonding agents rivalling welding in strength; of adhesives combining high holding power with high dielectric strength, resistance to insects, mold and fungi, or any one of many other special characteristics.

**Speed and More Speed**

Equalling the remarkable new functional abilities of these war-born adhesives in promise, are their almost incredible savings in application and curing time. Plywood can now be cured in minutes instead of hours; many packaging operations can be speeded up; labelling machines can be designed to operate faster. And in such industries as bookbinding, furniture making, and shoe manufacture, where production set-ups have been

*(Continued on next page)*

## *L. W. Bass Takes Post on U.S.I.-Airco Research Staff*

Dr. Lawrence W. Bass has been appointed Associate Director of Chemical Research, to serve in this capacity jointly for U. S. Industrial Chemicals, Inc., and Air Reduction Company, Inc. He will be responsible for the development of plans for coordination and expansion of research of the two companies, as well as for the coordination of the work of the Research Department of each company with the work of the various operating departments.

L. W. Bass

Dr. Bass has been serving as Director of the New England Industrial Research Foundation in Boston. Previously, he was associated with the Rockefeller Institute, the Borden Company as Director of Research, and Mellon Institute as Assistant Director. He is Vice-President of the American Institute of Chemical Engineers and Non-resident Vice President of the Chemists' Club in New York.

## *Two Novel Engine Cleaners*

Two patents have recently been issued, one in the United States and the other in Germany, on solvents to remove carbon deposits from internal combustion engines. The first covers a mixture of dibutyl phthalate and cresol. The second uses a mixture of wax, trichloroethylene, camphor, acetone, turpentine oil and amyl acetate.

ADVERTISEMENT—*This entire page is a paid advertisement.*

July ★ **U.S.I. CHEMICAL NEWS** ★ 1944

## Resin Structure Studied With the Aid of Acetone

In spite of the wide industrial use of phenol-formaldehyde resins, comparatively little definite information exists as to the chemical and physical nature of these resins. One reason for this lack of knowledge lies in the difficulty of studying thermo-setting resins; X-ray diffraction patterns and other conventional methods of investigation are inoperative with the cured resins.

Recently, two Massachusetts scientists have utilized the swelling action of acetone on cured phenolic films to produce patterns which can be examined under polarized light. By determining the time required for development of these patterns, they have been able to study the kinetics of the curing process and draw some interesting conclusions as to the structure of the ultimate resin.

## *Patents New Ointment for Skin Infections*

According to a recently-awarded patent, solutions of iodo-acetone or iodo-acetophenone, dissolved in acetone and mixed with petrolatum, provide an ointment which is efficacious in the treatment of fungus and staphylococus infections of the skin and scalp.

## Reduces Surface Tension of Diesel and Other Fuels

A recently granted patent covers liquid-fuel compositions in which a dialkyl carbonate is incorporated to reduce the surface tension, thereby improving atomization and preventing clogging of spray nozzles. The addition is also claimed to improve the anti-knock value and lubricating ability of the fuel. Carbonates mentioned include dibutyl and diethyl. Alcohols or ketones may be used to improve the blending.

## *Ergosterol Extracted from Penicillin Mold*

In studying *Penicillium notatum*, the mold grown for the production of penicillin, three scientists have discovered a possible new source of ergosterol, the material which yields vitamin $D_2$ upon irradiation. As reported in a recent issue of *Science*, they found that the non-saponifiable matter from a butanol extract of the wet mycelium produced a sterol which could be readily purified and which possessed the distinctive properties of ergosterol.

## War-Born Adhesives

*(Continued from preceding page)*

built around unavoidable delays to allow for glue setting, the possibilities for production short cuts are sizeable.

### U. S. I. Products Used

U. S. I. solvents, plasticizers, and resins are widely used in connection with the new resin adhesives, as can readily be seen by considering some of them individually:

1. Phenol-formaldehyde glues used in making plywood, for example, are often applied in alcoholic solvents. Phenolic baking cements used in resistors, transformers, basing light bulbs, radio tubes, etc., because of their insulating properties, are also applied in alcohol solvents.

2. Cellulose adhesives are made from ethyl cellulose, cellulose nitrate, or cellulose acetate used with a resin, a plasticizer and a solvent. The plasticizer is usually either diethyl or dibutyl phthalate for nitrocellulose and ethyl cellulose, or diethyl and dimethyl phthalates for cellulose acetate. The solvent may be ethyl or butyl acetate, alcohol, or acetone diluted with benzene or toluene. These adhesives find use for such varying purposes as making laminated safety glass, sealing food packages, and stiffening collars and cuffs.

3. Polyvinyl cements also include dibutyl phthalate as plasticizer, and utilize ketone solvents such as acetone. These cements are very versatile, having the ability to join glass, wood, metal, plastics, cloth, mica, stone, and other dissimilar materials.

4. Acrylic resin cements have good electrical properties. They are soluble in ethyl and butyl acetate, and employ dibutyl phthalate as a plasticizer.

5. Chlorinated rubber adhesives are soluble in hydrocarbon solvents with esters and ketones in combination. These adhesives will join metal to rubber and are useful in connection with wood, leather, cork, and linoleum. They are also employed in rendering textiles, paper, cellulose derivative sheets, etc., impermeable.

6. In many types of adhesive tape, including some now used for camouflage purposes, special non-oxidizing ester gum is used for imparting tack.

7. Again, ester gum is used in waterproof bread-wrapping paper which is now sealable by the mere application of heat.

## TECHNICAL DEVELOPMENTS

*Further information on these items may be obtained by writing to U.S.I.*

**A new plasticizer** for cellulose acetate is being offered as an alternate for some plasticizers now subject to priority restrictions. The product is reported to yield tough, rubbery solids which can be calendered into sheets, or used as adhesives. **(No. 827)**

U S I

**Rot-resistant rope,** twisted from extruded synthetic filaments, is reported to be standing up successfully in the presence of acid and alkali fumes, where vegetable-fibre ropes deteriorate rapidly. Sold now in sizes up to ⅝ inch, in regular coil and spool lengths. **(No. 828)**

U S I

**A new corrosion-proofing liquid,** is applied by dip, brush or spray to form a water-repellent coating which the maker states will not melt, run, or become brittle. Said to be inert to metal and harmless to normal skin, the new product serves as a lubricant in metal-working, is removable by petroleum solvent. **(No. 829)**

U S I

**Plastic-synthetic rubber mixtures,** which can be extruded, molded, calendered, or spread, are now offered for use in making shoe soles, hose covers, tank linings and other items. Said to combine the desirable characteristics of both the plastic and rubber, the blends are available in vulcanizable and non-vulcanizable types. **(No. 830)**

U S I

**A new adhesive** for applying labels to fibre, wood, paper, metal, and paraffine surfaces comes as a liquid which is applied cold by brush. Product is said to stick quickly and be water-insoluble when dry. **(No. 831)**

U S I

**Higher insecticidal power,** for household and livestock sprays, is said to be obtainable with a new toxic agent now being offered to insecticide manufacturers. Unusual stability, high knock-down and kill, and long-lasting repellency are economy factors attributed to the new product. **(No. 832)**

U S I

**A new soap ingredient,** said to soften even cold sea water, is now being used in soaps for the Army. Interesting prospects are seen for this sulfonated product which unites with hard-water minerals to form a finely-dispersed, non-settling precipitate. **(No. 833)**

U S I

**A new synthetic rubber,** promising to be especially suitable for use in heavy-duty truck tires, is announced. The new rubber is said to be strong, tough, and resistant to cuts and abrasion. It is also said to have greater resistance to heat, moisture, and oil than other synthetic rubbers. **(No. 834)**

U S I

**A new sealing material** is said to resist heat hardening and attack by vapors or fumes, and to have a variety of uses in closing cracks and seams against moisture and water absorption. **(No. 835)**

U S I

**A new synthetic beeswax** is suggested for use as a replacement for natural beeswax, or for blending. It is reported to give a stable emulsion particularly useful in ointments, cosmetics, and soaps. **(No. 836)**


**U.S.I INDUSTRIAL CHEMICALS, INC.**

60 EAST 42ND ST., NEW YORK 17, N. Y. — CHEMICALS, RESINS, ANTI-, SOLVENTS, ALCOHOLS, FREEZE, USI SERVICE TO INDUSTRY — BRANCHES IN ALL PRINCIPAL CITIES

**ALCOHOLS**
Amyl Alcohol
Butanol (Normal Butyl Alcohol)
Fusel Oil—Refined
**Ethanol (Ethyl Alcohol)**
Specially Denatured—all regular and anhydrous formulas
Completely Denatured—all regular and anhydrous formulas
Pure—190 proof, C.P. 96%, Absolute
*Super Pyro Anti-freeze
*Solox Proprietary Solvent
***ANSOLS**
Ansol M
Ansol PR

**ACETIC ESTERS**
Amyl Acetate
Butyl Acetate
Ethyl Acetate
**OXALIC ESTERS**
Dibutyl Oxalate
Diethyl Oxalate
**PHTHALIC ESTERS**
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate
**OTHER ESTERS**
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

**INTERMEDIATES**
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate
**ETHERS**
Ethyl Ether
Ethyl Ether Absolute—A.C.S.
**RESINS**
Natural
Synthetic

**ACETONE**
Chemically Pure
**FEED CONCENTRATES**
*Curbay B-G
*Curbay Special Liquid
*Vacatone 40
**OTHER PRODUCTS**
Collodions
Ethylene
Ethylene Glycol
*Indalone
Nitrocellulose Solutions
Urethan

*Registered Trade Mark

# War Check List—Government Regulations

*Digest of Federal rules and regulations on price control, allocations and other regulatory measures of cosmetic, soap and flavoring industries issued or proposed during the past month*

### Between Size Pricing

Manufacturers who introduce new, between size packages, to their current line, may arrive at a price by splitting the price difference of the two nearest sizes in proportion to the quantity difference, according to MPR 392, Amendment 5.

### Alcohol Effects Pricing

Under OPA Price Regulation No. 392, Amendment 4, new products containing ethyl alcohol must be priced on the basis of $3 per proof gallon. This ruling does not affect products on the market before June 12.

### Isopropyl Alcohol Order Amended

Order No. M-300 on the allocation of isopropyl alcohol has been amended to read:

"Each person seeking delivery of isopropyl alcohol for rubbing alcohol purposes shall furnish the War Production Board with information as to his past use. This report shall be made in Table V of the first WPB-2045 application which he files after June 1, 1944, and it need not be repeated. In the heading of column 23 write in 'Fiscal year ending,' and in the column enter 'June 30, 1941,' 'June 30, 1942,' and 'June 30, 1943.' In the heading of column 25 write in 'S.D.A.23-H-gallons used,' and fill in columns 24 and 25 accordingly."

### Wooden Container Amended

The War Production Board Order L-232 covering wooden shipping containers has been amended so that it does not include containers constructed by a container-user for his own use, provided it is made from waste materials such as edgings, trim and off-all. He may also use second-hand lumber, provided the container is not made in a box factory or woodworking establishment which sells its products to other users.

### Fat Quotas Lifted on Abrasive Soap

Restrictions have been removed on the use of fats and oils in the manufacture of paste and powder hand soap, to be used by industrial workers, through an amendment of War Food Administration Order No. 42.

### Current Coconut Oil Tax Extended

The current coconut oil tax, under which the two-cents-per-pound tax collectible on the first domestic pressing of non-Philippine coconut oil is suspended, has been extended by House bill (H.R. 4837).

### Gift Packaged Cosmetics

MPR 393, Amendment 5, permits packers of gift cosmetics who customarily sold these sets under a different pattern of trade discounts from those used in selling individual packaged cosmetics to use the former discounts in pricing new gift sets.

### Zinc Oxide in Soap

General Preference Order M-11-a has been amended to permit the use of zinc oxide in toilet soap.

### Soap Ceiling

Office of Price Administration Order No. 391 places a ceiling price on soaps and cleansers. Manufacturers and wholesalers may not sell above the established maximum price, although they may sell at a lesser price.

### Rosin in Soap Eased

War Food Order No. 86 has been amended to remove provisions requiring the use of additional rosin in the manufacture of soap.

When the order was issued last November soap-making fats were tight, and rosin was comparatively plentiful. Now the situation is reversed, due to low production and high consumption of rosin, and record high level of slaughter for hogs and cattle to produce fats.

Soap inventory restrictions imposed by WFO-86 will be maintained.

### Pine Oil Prices

Intermediate sellers of pine and pine tar oil may pass on increases resulting from adjusted producers' prices, according to the Office of Price Administration, MPR 446, Am 2. This does not apply to persons selling at retail to ultimate consumers. These sellers may not increase their present prices.

### Hexahydric Alcohols Under Order

General Allocation Order M-300 has been amended to place hexahydric alcohols under order.

### Glycerine Recovery Order

The War Food Administration has revoked WFO-33 on glycerine recovery. Now, soap manufacturers are no longer required to recover glycerine, nor to file reports on glycerine recovery.

### Gum Rosin Under Ceiling

Gum rosin has been placed under a price ceiling with the issuance of a temporary regulation by the Office of Price Administration. The temporary measure will be replaced by a permanent regulation at a later date.

Ceilings are keyed to quotations on the Savannah, Georgia, Cotton and Naval Stores Exchange.

The ceiling is established through Temporary Maximum Price Regulation No. 36.

### Use of Inedible Tallow Eased

The use of inedible tallow or grease, for products other than soap, has been amended through a change in War Food Order No. 67.

### Price Changes in Containers

Minor changes have been made in MPR-529, regulating the fixed prices on used shipping containers. One

(*Continued on page 93*)

# PERFUMERS

BASIC MATERIALS

Burton Bush

BASIC

PERFUME

SPECIALTIES

## BUSH AROMATICS

INCORPORATED

136 LIBERTY STREET
NEW YORK CITY

Cable address: ARROBUSH
Telephone: WOrth 2-6557

COLOR RIGHT
TEXTURE RIGHT

BEAUTIFUL women chose the facial cream with the finest texture and the purest color. Facial cream made with a Beehive Brand Beeswax base has a better chance to meet these requirements.

Beehive Brand Beeswax is 100% pure, it is uniform in texture and perfectly white. Our buyers select it from the finest grade of crude beeswax. It is then tested for purity, quality and uniformity in our own laboratories, and bleached by the sun and air.

Uniformity of Beehive Brand Beeswax will keep your product always up to the high standard you set for it. The quality and uniformity never change. It is entirely free from adulterants and imperfections of any kind. And back of every tablet of Beehive Brand Beeswax stands the reputation of the manufacturer.

WRITE DEPT. A-7 TODAY FOR COMPLETE INFORMATION

# Announcements

### Stokes & Smith Co. Appoints Agent

The E. M. Noel Co., 74 Brookline Ave., Boston, Mass., has been appointed New England representative for the Stokes & Smith Co. and will handle the complete line of its filling and packaging machinery throughout the six New England states. The special packaging department will be under the direction of L. M. Selleck who has had many years of experience in this specialized industry.

### First Tennant Memorial Lecture

To keep alive the memories of pioneers in science and industry the Society of Chemical Industry, London, has recently established a series of endowed memorial lectures. The original Charles Tennant work in the fields of chemistry has been made the subject of the first memorial lecture. American-British Chemical Supplies Inc., one of the Tennant group of companies in this country has reprinted this lecture for general distribution. A copy will be sent to anyone interested.

### Ceylon Essential Oils

Citronella oil exports from Ceylon were considerably higher in volume during the first quarter of 1944 than during the corresponding time in 1943.

The United States is now the largest buyer, followed by British India, whose purchases amount to about one-fourth those of the United States.

Total annual production of citronella is estimated at between 11,000 and 13,000 hundredweight. However, production of cinnamon-leaf oil is expected to amount to about 25 per cent of the pre-war level.

### New Shulton Showrooms

Shulton, Inc., has opened new showrooms in Los Angeles, Calif., at 120 South San Pedro Street. Harry H. Waters, Branch Manager, is in charge. In addition to showrooms, the company has a large warehouse in the same building.

### Olive Oil Industry in Spain

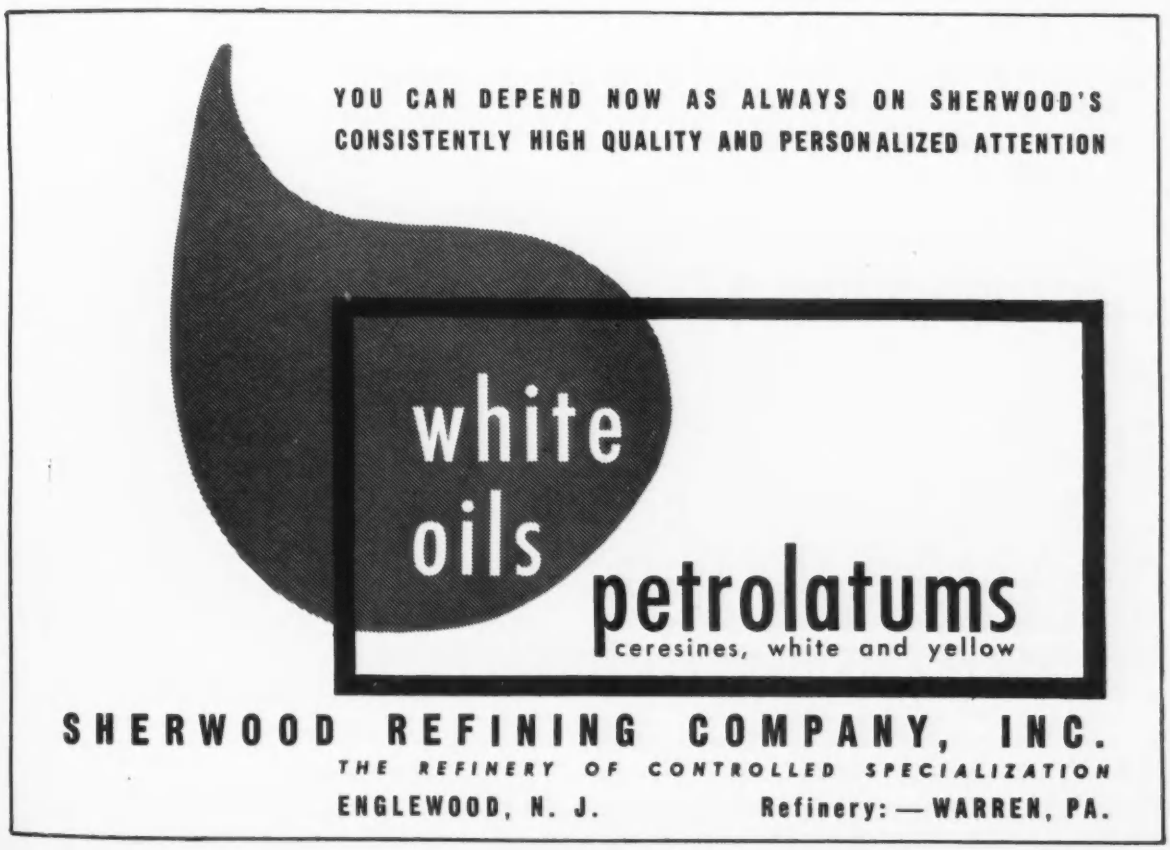
Consumption of olive oil in Spain is estimated at 240,000 metric tons annually. If the yield from recent pressings reaches expectations, the country should have an appreciable surplus. No stocks were carried over from last year's crop.

The Government did not authorize exports of olive oil in 1943, and no authorization has been forthcoming so far this year, according to latest information. In 1943 the Spanish Peninsula consumed 55,245 tons; Spanish possessions used 17,483 tons.

### Gerard J. Danco, Inc., Moves

Gerard J. Danco, Inc., has moved to new quarters at 3 East 44th Street, New York 17, N. Y. Offices, laboratory and stockroom will function with more efficiency, owing to the increase in space which has been effected; the increase being over 100 per cent.

Gerard J. Danco, president of the firm and internationally known in this industry, is a member of the Advisory Board, War Food Administration, Essential Oils Industry.

ISCO

ABSORPTION BASES

for

COSMETICS . .
CREAMS . . .
LOTIONS . .

and

HAIR PREPARATIONS
• Water-in-Oil Emulsifier

COSMETIC TALCS

Controlled as to
PURITY, PARTICLE SIZE and SHAPE - - to insure best slip and covering properties

•

INNIS, SPEIDEN & COMPANY
Established 1816
117 Liberty Street . . . NEW YORK 6
BOSTON • CHICAGO • CINCINNATI
CLEVELAND • GLOVERSVILLE • PHILADELPHIA

Tombarel

ESSENTIAL OILS
AROMATIC CHEMICALS
PERFUME BASES

for
PERFUMES
COSMETICS
AND SOAPS

Special Perfume Creations that answer the call for something "individually yours."

TOMBAREL PRODUCTS
CORPORATION
L. J. Zollinger, President
12 East 22nd Street New York 10, N. Y.

# NEWS and EVENTS

### New Revlon Manager

Thomas G. Bradley has been appointed as Sales Manager, in complete charge of all Revlon retail operations on the Pacific Coast.

### Mum Expands Advertising

In addition to its current magazine and radio campaign, Mum is expanding its list of newspapers used to include 150 newspapers in cities of over 50,000.

### New Peggy Sage Agency

Peggy Sage, manufacturers of nail enamel and other hand preparations, has appointed Abbott Kimball Co. as its advertising agency.

### Rosin Shortage Predicted

The Chemicals Bureau of the War Production Board reports an expected deficit of about 600,000 barrels of rosin for the crop year ending March 31, 1945. Production has been estimated by government representative at 1,650,000 barrels, against expected distribution of 2,207,000 barrels.

### Boston BIMS Golf Party

More than 50 Boston BIMS turned out for the first golf party of the year. It was held at Woodland Golf Club on June 22, and was a very successful outing.

### Florasynth Supper

The Florasynth Laboratories, Inc., gave a buffet supper to their many friends in, and near, Chicago, on June 19. The occasion of the gathering was the opening of the new plant at 600 West Monroe Street, Chicago, Illinois.

### Atlantic City Drug Order

Atlantic City Wholesale Drug Co., Atlantic City, N. J., wholesaler of drugs and cosmetics, has been ordered by the Federal Trade Commission to cease from inducing and receiving discriminations in price which are prohibited by the Robinson-Patman Act.

### Penick Buys Duval

Compagnie Duval, 121 East 24 Street, New York, N. Y., has been purchased by S. B. Penick & Co., 50 Church Street, New York, N. Y. The Duval personnel will continue to serve its many foreign and domestic customers, and will become a unit of the Penick Essential Oils and Aromatic Chemicals Division. It is said that the acquisition will be advantageous to customers.

### Cosmetics Products Seizures

Several seizures of cosmetics containing uncertified coal tar dyes have been reported. These dyes are of the so-called carcinogenic (cancer producing) "yellow butter" type. It is reported that F & D A inspectors are on the lookout for other uncertified, potentially dangerous dyes in cosmetics.

### Lemon Oil Task Group

Due to an error we failed to report last month R. Righton Webb as being a member of the newly formed task group on lemon oil.

The correct, and complete, list of names comprising this group consists of: R. Righton Webb, W. J. Bush & Co.; Percy C. Magnus, Magnus, Mabee & Reynard, Inc.; H. P. Wesemann, Fritzsche Brothers, Inc.; Dr. H. J. Kohl, Norda Essential Oil & Chemical Co.; and F. T. Dodge, Dodge & Olcott Co.

### Face Powder Boxes

The precedent was established in 1940 that face powder manufacturers would be permitted to allow space in boxes for the insertion of a thin powder puff, this was to apply only in the ten-cent size.

Since that time there have been some violations of the spirit of the original precedent, so that the Food and Drug Administration has begun an aggressive campaign against deceptive face powder containers. Every face powder manufacturer should give this fact careful consideration.

### Webb Oversees Citrus Oil Production

R. Righton Webb, treasurer and general manager of W. J. Bush & Co., Inc., New York, N. Y., has returned from a visit to the National City, Calif., plant of the company. It may be of interest to recall that W. J. Bush & Co. started the production of cold pressed oils of lemon and orange at this plant back in 1913. Since then they have made steady progress and are now producing not only oils of lime, orange, grapefruit, tangerine and lemon but also the corresponding fruit juices. The latter continue to be taken almost exclusively by the armed forces.

Mr. Webb, while in National City, conferred with the managers, Wilbur Bradley and Jack Barrett, who have everything under excellent control. The labor scarcity has been one of the chief difficulties but all things considered this problem has been surmounted due to the ingenuity of the factory engineer, Nick Smith.

### Helene Curtis Complaint

National Mineral Company, trading as Helene Curtis Industries, is charged with a complaint issued by the Federal Trade Commission with misrepresentation.

Twenty days will be given respondent for filing an answer to the complaint.

### Lever Buys Pepsodent

The Lever Brothers Company has acquired the Pepsodent Company, manufacturers of dentifrices, for a reported $10,000,000 cash.

Charles Luckman will continue as president of Pepsodent, which will operate as a separate division of Lever Brothers, with headquarters

Natural and Aromatic
Raw Materials
Essential Oils
for

*Perfumery* •

*Cosmetics* •

*Soap* •

LAUTIER
FILS
INCORPORATED
154-158 West 18th Street
New York, N. Y.

*Grasse · Paris · London · Beyrouth*

***Manufacturers of Quality Raw Materials For Perfumery For Over 100 Years***

**Isopropyl Alcohol**

We Permanently Deodorize
and Purify
your
Isopropyl Alcohol
by
Special Process

**INEXPENSIVE**

Suitable for the Most Delicate Perfumes

*Write for samples and information*

**Rodex Laboratories**
42-60 Crescent Street
Long Island City 1, N. Y.
Ironsides 6-9499

TURNER TUBES •

SMART
MODERN
DURABLE
UNIFORM
COLORFUL

Manufacturers of COLLAPSIBLE TUBES since 1898

TURNER WHITE METAL CO., Inc. . . . New Brunswick, N. J.

and plant in Chicago. No changes are to be made in the personnel of the two companies.

It is planned to merge the entire drug sales department of Lever Brothers with the Pepsodent Company, so that the latter will handle the distribution of its own products, plus Vimms and Lifebuoy Shaving Cream, and of Lux, Lifebuoy and Swan soap products in the drug field.

The purchase of the Pepsodent Company by Lever Brothers marks its first entry into the dentifrice field since its formation in 1899, and its major acquisition.

### Allied Products Buys Plant

Allied Products has opened a new branch in Middleton, N. Y. The new plant is in a modern, reinforced concrete, fireproof building.

Manufacturing and manufacturing control will continue at Suffern. Much of the assembly work is to be transferred to the new plant, however, which is to be under the direction of George Hackenberger.

It is expected that the assembly lines will be set up, and other equipment installed by August 1.

### New Winthrop Division

Winthrop Chemical Company has opened a new Division of Product Development.

The new division will explore the post-war commercial potentialities of products now being supplied to the Armed Forces, as well as new products developed in the company's laboratories.

### New York BIMS Golf

The BIMS of New York held their first outing for 1944 at the Crestmont Golf Club, West Orange, N. J., on Tuesday, June 27th.

Perfect weather, good attendance and tight golf scores contributed to the pleasure of those attending.

### Percy Magnus Dinner

Percy C. Magnus, president of Magnus, Mabee & Reynard, New York, N. Y., gave a dinner in the interest of Disabled American Veterans, at the Yale Club, on June 21.

### La-Nu Stipulation

Hannah May Powell, trading as Powell Distributing Company and as La-Nu Distributing Company, has entered into a stipulation with the Federal Trade Commission in which it is agreed that she cease and desist representing that La-Nu Liquid Shampoo gives life to the hair, or that La-Nu Medicated Ointment assures a healthy scalp.

### New Staff Member

Ruth D. Goldberg, formerly with Procter & Gamble and more recently with Fairchild Publications, has joined the staff of the Association of American Soap and Glycerine Producers as Special Assistant to the Manager, Roscoe C. Edlund.

### New Soap Bids Asked

The War Food Administration did not make awards on offers received to supply up to 100 million pounds of yellow laundry soap. New bids are being requested on different shipping container specifications.

### Virginia Law on Hormone Creams

The State of Virginia amended the Hypnotic Drug Law, effective June 11, on hormones and hormone preparations, which includes hormone creams, so that these preparations are placed on the list of dangerous drugs. Hereafter they may not be sold except by a registered pharmacist or on a doctor's prescription.

### Middlebrooke Lancaster Stipulated

Middlebrooke Lancaster, Inc., compounders and bottlers of hair and scalp preparations, has stipulated with the Federal Trade Commission that it will desist from representing that its preparation Nutrine is safer than Castile Soap, that Nutrine is the safest shampoo on the market, that Nutrine Rinse is not a hair dye, or that Nutrine is a preventative for falling hair.

### DCAT Luncheon

The Drug, Chemical and Allied Trades Section of the New York Board of Trade met at a luncheon on June 30, at the Hotel Pennsylvania, New York City. Discussion was devoted mostly to reports from officers from fields of combat.

### Martin Laboratories Expand

Martin Laboratories announce the purchase of the Ferguson Laboratories, one of the oldest research and analytical laboratories in the country. With this new purchase there are now four plants in the Martin set-up.

### Associated Distributors, Inc., Formed

A new corporation, known as Associated Distributors, Inc., has been formed to handle the various cosmetics lines formerly merchandised by Associated Distributors.

J. L. Younghusband

J. Leslie Younghusband will remain as chairman of the new corporation, as well as head of the individual company which has been set up to operate the Dana Perfume business.

Associated Distributors will manufacture and distribute Chen Yu, DeWans, 5 Day underarm pads, 5 Day creams and Quickies. The Dana Perfume Company will manage Taboo, Savage and Tatoo lines of cosmetics and perfumes.

Sales of both companies will be through Associated Distributors. There will be no change in the type of advertising, nor in merchandising policies. Advertising lineage will be increased.

### Certified pH Buffer Tablets

A comprehensive line of compounded solid buffers covering the region 2.0 to 12.0 pH in steps of 0.20 pH is offered by the Burrell Technical Supply Co. From these 50 different formulas the exact pH value any particular problem demands may be selected, it is stated, with assurance that the resulting buffer will be correct to within 0.02 pH. A certified buffer solution is prepared by dissolving one certified tablet in 100 ml. of warm, distilled water. The tablets are packed 12 per glass vial and are hermetically sealed. Each sealed vial is labeled with full instructions for use and with the pH cearly indicated.

### Affiliated Drug Stores Meeting

The Autumn meeting of the Affiliated Drug Stores will be held at the Hotel Biltmore in New York, N. Y., on October 16 to 19 inclusive.

# BRIDGEPORT...

For the past two years our facilities have been devoted almost exclusively to the production of war materials. We have been fortunate, in that we have been able to handle this work on the same equipment used for our regular peace time products, and, consequently, when material again becomes available for lipstick containers, vanity cases and other metal cosmetic items we will be prepared to start producing our regular line immediately. If you too are planning your post war program, we will be glad to assist you.

**THE BRIDGEPORT METAL GOODS MFG. CO.**

*Established 1909*

BRIDGEPORT 'PHONE BRIDGEPORT 3-3123 CONNECTICUT

VANITY CASES • ROUGE CASES • PASTE ROUGE CONTAINERS • LIPSTICK HOLDERS (ALL TYPES) • POWDER BOX COVERS • EYEBROW PENCIL HOLDERS • BOTTLE CAPS • JAR CAPS • METAL NOVELTIES TO ORDER

---

*Paper Boxes for the Cosmetic and allied trades . . . .*

Present conditions preclude us from accepting any orders at the present time for immediate delivery.

*Eugene K. Plumly Co.*

Federal and Juniper Streets
Philadelphia 47, Pa.

....LAST WORD IN "ON THE PACKAGE" PRINTING SENDS HELENA RUBINSTEIN'S "HEAVEN SENT" OUT INTO THE WORLD SELF-ASSURED AND LOVELY IN ITS PERFECTION.

SILK SCREEN PRINTERS TO THE COSMETIC FIELD
**CREATIVE PRINTMAKERS GROUP**
14 WEST 17 STREET • CHELSEA 3-6803-4-5

# New Products, Ideas and Processes

### Truck-Man for Moving Materials

For safe and efficient moving of skidded loads of one ton or under, the new improved one-ton capacity Truck-Man has been announced by Yard-Man Inc. A patented two speed drive makes a low and a high speed instantly available. The Truck-Man

New Truck-Man in Operation

turns in its own length and it is added that the new operator's seat gives more comfort and increases the efficiency of the operator. The use of the seat which also serves as a protective shield for added safety is said to be particularly advantageous when women operators are employed. Other improvements include heavier load wheels with a 4-in. tread, a gas tank of one gallon capacity providing for eight hours of normal operation, brakes which are automatically set when the machine is not in action and a new fly ball type governor. It is especially recommended for normal factory operations requiring the constant movement of loads of under one ton where it is claimed it moves material faster, speeding production and lowering production costs.

### New Carboy Cap

The War Department has adopted a new plastic cap which may be fitted to a standard five-gallon carboy.

The new cap and carboy assembly was developed over a period of 18 months of research.

The newly-designed assembly is resistant to both acids and atmospheric conditions.

### New Publications

The latest issue of *Lab Scents*, published by Aromatic Products, Inc., 15 East 30th Street, New York, N. Y., is now available.

George M. Hocking's latest check list has been issued by S. B. Penick & Co. This booklet consists of two check lists of periodicals. One list covers the field of pharmacognosy, the second that of pharmacology. It may be obtained without charge.

The Superintendent of Public Documents has announced the publication of a loose-leaf manual of Renegotiation Regulations issued by the War Contracts Price Administration Board. The manual initially contains approximately 275 pages and will be supplemented from time to time. It is available at a prepaid price of $2, including 12 monthly supplements.

W. J. Bush & Co., 11 East 38th Street, New York, N. Y., has just issued a new catalogue. This year, due to the unsettled raw materials situation, a catalogue was issued in the place of the usual price list.


Amyl

ACETATE
BUTYRATE
FORMATE

THREE NORTHWESTERN FLAVORING ESTERS WHICH ARE STILL AVAILABLE IN MODERATE QUANTITIES

THE LARGEST MAKERS OF BUTYRIC ETHER IN THE WORLD

THE NORTHWESTERN CHEMICAL CO.
INCORPORATED 1882 WAUWATOSA, WISCONSIN

USE INTERSTATE TECHNICAL AND CERTIFIED COLORS

OUTSTANDING EXCELLENCE

. . . That accounts for the popularity of Interstate Colors.

No matter what your color requirements are, consult us. Our expert advice will prove of great value to you.

CHLOROPHYLL • SAPONINE

INTERSTATE COLOR CO. INC.
3 BEEKMAN STREET, NEW YORK

Lanone

LOOKS — BEHAVES — FEELS

Like Lanolin

BUT

HAS GREATER EMULSIFYING PROPERTIES
PRACTICALLY ODORLESS

Lanone is being successfully used in lipstick, shaving creams, hand creams, emollient creams and other cosmetics.

*Write for Literature and Samples*
*Price 35¢ lb. in drums*
*quantity price lower*

CONTINENTAL
CHEMICAL COMPANY
2640 Harding Ave., Detroit 14, Mich.

ESSENTIAL OILS — DREYER — AROMATIC CHEMICALS

P.R.DREYER INC.
119 WEST 19TH STREET
NEW YORK, N.Y.

IMITATION
OTTO ROSE

A duplication which accurately captures the full Rose character. Same strength as the NATURAL OTTO ROSE at one-sixteenth the price. Give it the same tests as the NATURAL OTTO ROSE and compare.

SAMPLES and PRICES
ON REQUEST

FLOWER OILS • PERFUME SPECIALTIES

ORIGINAL DESIGNS ENGRAVED, PRINTED, DIE STAMPED, EMBOSSED

PHONE: ALGONQUIN 4.6760

Box-Wraps & Labels

SPECIALIZING IN DISTINCTIVE COLOR
PRINTING FOR THE TOILET GOODS INDUSTRY

RICHARD M. KRAUSE INC. 50 E. 19TH ST., NEW YORK 3 N.Y.

# Trade Jottings for the Month

### Syrian Alcohol

A modern distillery has been established near Beirut, Syria. It has an estimated annual production capacity of 250 metric tons. A number of smaller plants already in operation bring the total volume to around 350 tons per annum. This alcohol is made from grain.

### "E" Award to Merck

For the third time all three plants of Merck & Co., Inc., manufacturing chemists, have won the Army-Navy "E" Award. Since Pearl Harbor the company has supplied more than 25,000,000 packages of drugs and chemicals for use by the Armed Forces.

### Winthrop Chemical Anniversary

Winthrop Chemical Company informally marked its twenty-fifth anniversary with a dinner at the DeWitt Clinton Hotel, New York, N. Y., on June 28.

### Imports into Trinidad

Imports of toilet preparations, exclusive of liquids, from the United Kingdom into Trinidad, B.W.I., declined in value from $68,927 in 1941 to $66,366 in 1942. Imports of the same products from the United States increased, the same length of time, from $2,349 to $66,799.

### Higher Corn Syrup Ceilings

Production curtailment, caused through corn shortage, has resulted in an increase in ceiling prices on corn syrup and crude corn sugar. The higher prices are designed to maintain capacity output.

### Mathieson Alkali Representatives

H. P. Smith, former president of George Chemical Company, and Thomas Tarpy Schulten, formerly with General Chemical Company, have been appointed field representatives of the New York office of the Mathieson Alkali Works.

### Canada Changes Box Regulations

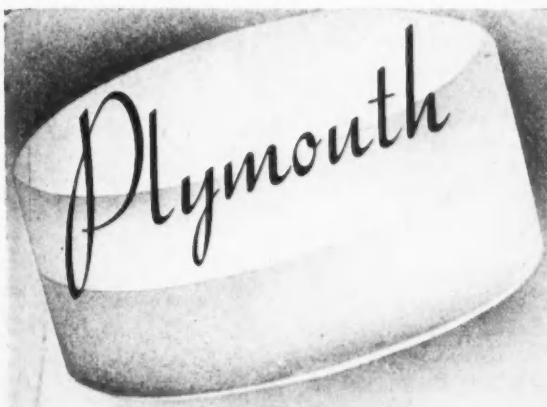
Section 4 of Administration's Order No. A-1001, prohibiting the manufacture of boxes having three windows with transparent substance has been revoked. Also, Section 5, of the same order, which prohibited the printing of a box with more than two colors of ink has been revoked.

### High Alcohol Output

The War Production Board has announced that during the first four months of 1944 production amounted to 192,000,000 of 190 proof alcohol. This compares well with the 137,400,000 production during the same period of 1943. Total 1944 supply is estimated at 612,000,000 gallons. Of this total, about 300,000 gallons have been distilled from potatoes. The present stockpile is 86,100,000.

### Export Duties in Reunion

Special export-duty surtaxes in Reunion on exported vanilla, and essences of geranium, cuscus-grass and yland-ylang, when the values of the products reach certain quotations, have been revised, mostly down, by order No. 1510 D.A. of Oct. 6, 1943.


POWDER BASE NO. 7

**Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.**

**Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it, plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15% and a formula is offered showing its use in this percentage.**

**Samples are at your disposal and we believe that this is one of the Plymouth products which warrants a serious investigation by every face powder manufacturer because it has real merit and will improve your product.**

A COMPLETE LINE OF COSMETIC RAW MATERIALS

PLYMOUTH BRAND

M. W. PARSONS

*Imports* AND

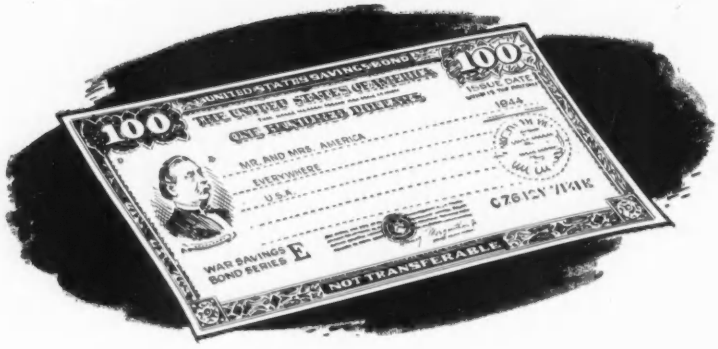
PLYMOUTH ORGANIC LABORATORIES, Inc.

59 BEEKMAN STREET
NEW YORK, N. Y., U. S. A.

TELEPHONE: BEEKMAN 3-3162 — 3163 — 3164
CABLE ADDRESS: PARSONOILS, NEW YORK

# *He* won't dodge this-

# Don't *you* dodge this!




**The kid'll** be right there when his C. O. finally gives the signal . . .

There'll be no time to think of better things to do with his life. THE KID'S IN IT FOR KEEPS—giving all he's got, *now!*

We've got to do the same. This is the time for us to throw in everything *we've* got.

This is the time to dig out that *extra* hundred bucks and spend it for Invasion Bonds.

Or make it $200. Or $1000. Or $1,000,000 if you can. There's no ceiling on this one!

The 5th War Loan is the biggest, the most vitally important financial effort of this whole War!

5TH WAR LOAN

## *Back the Attack!* - BUY MORE THAN BEFORE

THE AMERICAN PERFUMER AND ESSENTIAL OIL REVIEW

*This is an official U. S. Treasury advertisement—prepared under the auspices of Treasury Department and War Advertising Council*

## Obituary

### Dr. Ernest John Parry

The death occurred on April 30, 1944, of Dr. Ernest John Parry, D.Sc., F.C.S., F.R.I.C. He passed away in his 73rd year at his home, Kingsdon Hall, Harlow, Essex, England, after a somewhat protracted illness.

Although he carried on in London, for many years, a varied practice as an analytical and consulting chemist, he was identified throughout the world as an authority on essential oils. His book, "The Chemistry of Essential Oils & Artificial Perfumes," was for many years a standard reference wherever English was read. In addition, he wrote other books, and was a frequent contributor to the technical press.

### Lt. Colonel John J. Toffey, Jr.

Word has been received of the death of Lt. Colonel John J. Toffey, Jr. Col. Toffey was formerly Cincinnati representative for the Aridor Company.

Col. Toffey was killed while leading his troops in action. He had made a magnificent record during his war service, which began as a Captain in the New Jersey National Guard. His decorations included the Purple Heart with Oak Leaf Cluster and the Silver Star.

Col. Toffey, a member of the Aridor staff from 1935 until his entrance into the Army, is survived by his mother, wife, a son and a daughter.

---

### Stating tax on price tags

OPA's new regulations on retail advertising copy and price tags for consumer goods covered by federal excise taxes require that the amount of tax on each item be clearly marked, although dealers will be permitted a choice of at least four ways to word the markups.

The new tax law places a 20% levy on toilet cases and other cases, bags and kits for toilet articles.

For a number of these articles which were previously subject to excise taxes at a lower rate, OPA said new ceilings would be determined by subtracting the amount of the old tax currently included in the ceiling, and collecting the amount of the tax in addition to the old price without tax.

Here are four ways which the tax may be stated in advertising or price tags:

1. The price may appear with the amount of the tax separately stated in dollars or cents, for example: "Price, $1 plus 20c tax, total $1.20."

2. Price may be stated, with the percentage of tax to be added stated separately: "Price $1, plus 20% tax."

3. Total charge may be stated as the price including tax, with the notation that a 20% tax has been included: "Price $1.20, 20% tax included."

4. The retailer need not indicate the amount of tax opposite each item if somewhere in the layout "a clear notation appears" to the effect that on certain named items the 20% excise tax is included in the price.

These same rules will apply to catalogs and circulars, where again the retailer may note, if he wishes, that the 20% excise tax is included in the price for certain identified items on the page. Tax must be stated on sales slips in one of the first three ways mentioned above.


# 3 NEW PRODUCTS

**1—a new absorption base—**
**SORBOTEX 301**

This absorption base does not contain either lanolin or lanolin products and has considerably higher water absorption properties than absorption bases containing such products. Sorbotex 301 makes white, stable water-in-oil emulsions that will neither separate nor darken. Small additions to oil-in-water emulsions improve texture and increase stability.

Suggested uses: night creams, cold cream, ointment bases, permanent wave preparations, and similar products. Can also be used as an extender for lanolin.

**2—a new dispersing agent—**
**DISPERSOL 31**

This new synthetic organic solvent and dispersing agent for dyes and pigments has considerably greater solvent action than castor oil. It is miscible with all vegetable and mineral oils and waxes. Will not turn rancid.

Suggested uses: for dissolving bromacid and lake colors for lipstick and cream rouge. May be used as a complete or partial replacement for castor oil without change in balance of formula.

**3—a new emulsifier—**
**CERASYNT IP**

This is a new self-emulsifying wax that stabilizes emulsions containing large percentages of strongly alkaline or acid-reacting electrolytic substances.

Suggested uses: deodorant and permanent wave creams, water-soluble ointment bases, etc.

*Samples of any of the aforementioned products will gladly be sent upon request.*

**VAN DYK & COMPANY**
**INCORPORATED 1904**

*Manufacturers of Perfumery and Cosmetic Raw Material since 1901*

**Offices, Factory, and Laboratories: Main and William Streets, Belleville 9, New Jersey**
**Western Office: 1282 Sunset Boulevard, Los Angeles**

# PENN-DRAKE WHITE OILS

. . . meet your most exacting requirements with these characteristics: rapid liquefacation; even spreading; fast penetration; correct viscosity; odorless, tasteless, colorless qualities—without harmful impurities or unsaturated hydro-carbon. Standardize with PENN-DRAKE superior quality. Write Dept. 107 for complete information.

penn drake petroleum products

**PENNSYLVANIA REFINING CO.**
GENERAL OFFICES · BUTLER, PA.

Makers White Oils (U. S. P. and Technical). Petrolatums (all grades and colors). INSECTI-SOL (deodorized insecticide base). Deodorized and other Naphthas. Petroleum Sulphonates. Waxes. Industrial and Motor Lubricants and Greases. Fuel Oils. and other petroleum products

## CONFIDENCE

Enjoying the confidence of a long list of leading cosmetic houses is a privilege this laboratory has enjoyed for many years.

To warrant a continuance of such patronage, we devote our entire effort to maintain the highest possible standard of perfection.

At this time, we are privileged to serve the U. S. Armed Forces and Defense Plants with special preparations.

## KELTON
*Cosmetic Company*

230 West 17th Street, New York 11, New York.
819 Santee Street, Los Angeles 14, Calif.

*Lipstick · Eyeshadow · Rouge · Mascara · Powder*

Many years ago we first offered fine paper boxes to cosmetic manufacturers. It is significant that since then most of the concerns with whom we began business still call upon us to meet their needs.

•

Despite the shortage of raw materials it is our pledge never to depart from the high standard of quality that has always been identified with KARL VOSS paper boxes.

•

There is no finer cosmetic container than a KARL VOSS box.

•

KARL VOSS CORPORATION
DIVISION OF SHOUP-OWENS INC
HOBOKEN NEW JERSEY

## *JUST OUT!*

# BULLETIN on REPLACEMENTS

***FOR ESSENTIAL RAW MATERIALS***
**(No. 12)**

*Special 44-page Reference Bulletin, Prepared by M. G. deNavarre, Ph.C., B.S., Technical Editor of the AMERICAN PERFUMER.*

**An invaluable reference work, authoritative and comprehensive . . . on the present availability of materials, replacements . . . and 162 convenient sources of supply. All listings of products cross-indexed by number with manufacturers.**

***Edition Strictly Limited!***

***Order Your Copy* At Once . . . *Price $1.00***

**AMERICAN PERFUMER**
***AND ESSENTIAL OIL REVIEW***
**9 East 38th St., New York 16, N. Y.**

(Continued from page 79)

change is to permit payment of MPR-529 prices for boxes which have not been knocked down. The other allows wastepaper users to pay ceiling prices for used containers if they will sell or use them as shipping containers.

### Soapless Shampoo Taxation

An opinion has been handed down that shampoo oils and liquids containing 5% or less of saponaceous matter are taxable as toilet preparations when sold at retail; such oils and liquids containing more than 5% of saponaceous matter are not subject to the tax under section 2402 of the Internal Revenue Code, as amended by section 302 of the Revenue Act of 1943.

### Surplus Cellophane Stock

L-20 has been amended to allow for the disposal of surplus cellophane stock by any person without restriction, but the purchaser is obliged to use the material according to the provisions of the order.

### Glass and Closure Quota

WPB Order has been amended, L-103-b, to permit cosmetics manufacturers to use 100% of their quotas on glass containers, based on 1943, but limits closures to 85% for solid and semi-solid cosmetics, 50% for liquid and powder cosmetics. Hand soap and shaving soap are permitted a quota of 100%.

### Oil of Lemon Ceiling

Imported oil of lemon has been placed under a ceiling by OPA Order MPR 472, Amendment 3. This price is $2.925 per pound f.o.b. seller's point for the U. S., or other agency. Dealers maximum price f.o.b. seller's shipping point is:

| | *Price Per Pound* |
|---|---|
| 25 pounds and over | $3.25 |
| 10 " " " | 3.31 |
| 5 " " " | 3.33 |
| 1 " " " | 3.40 |
| 8 ounces " " | 3.50 |
| 4 " " " | 3.57 |
| 1 " " " | 3.89 |

### Cocoa Beans Quota

Quotas on cocoa beans have been set at 70% of the total amount processed by the manufacturer in a three-month period, based on a like three-month period in 1941, by WFO 25-1, Amendment 3.

# Here and There Among Our Friends

▸ Perry N. Zang is one of the very few if not the only buyer of toilet goods who has had broad experience in retailing, wholesaling and manufacturing over a period of 20 years. As buyer for Gimbel Brothers, Inc., New York, N. Y., he purchases toilet goods and drugs, stationery, small leather goods, books and religious articles. Before joining Gimbel Brothers he was with Thalhimers of Richmond, Va., for nine years as assistant divisional merchandise manager and buyer in charge of toilet goods, drugs, stationery, umbrellas, notions and cameras. Prior to that he was with the Allied Department Stores as New York buyer in which position he handled the same group of merchandise plus candy and groceries. From New York he was transferred to the Golden Rule Department Store of St. Paul, Minn. Prior to that he was with the Whelan Drug Co.—United Cigar Stores Co.—in New York, where he was buyer for candy and fountain supplies for 1100 stores in the chain. This followed experience in several of the chain's stores as manager. Before that he was chemist and perfumer for Oakley & Co., New York, perfumers and soapmakers. Thus his experience covers chain stores, chain department stores and individual stores giving him a broad background for his present duties. Incidentally while in Richmond, Va., he was called upon by the famous old College of William and Mary to conduct courses in retail merchandising in the Professional Institute in Richmond, a branch of the college.

Perry N. Zang

▸ Major Gail W. Fitch, president of the F. W. Fitch Co., Des Moines, Iowa, who has been serving as base quartermaster in the Warner Robins air service command at Robins Field, Ga., is to return to his office to resume his former civilian tasks. He is, however, subject to recall from inactive duty should an emergency arise.

▸ Fred C. Theile, president of P. R. Dreyer, Inc., New York, N. Y., has recuperated from his illness of ten months' duration to the extent that he now works at the office several days each week. His many friends in the allied industries will be gratified to learn of the excellent progress he is making in his recovery.

▸ Prof. Ralph Bienfang of the College of Pharmacy of the University of Oklahoma, Norman, Okla., who is well known in the perfume and allied industries for his odor research work has displayed a new facet of his talent. He wrote the words for the stirring Hospital Corps Song, dedicated to Ross T. McIntire, surgeon general of the U. S. Navy. The music was composed by Frank Beezhold. The song was published recently by the Oklahoma Pharmaceutical Association.

▸ Harry D. Koenig, president of Harry D. Koenig & Co., Inc., distributors of Martha Washington Colonial cosmetics was recently honored by the Grand Lodge of Masons of New York State. He was past master of Veritas Lodge No. 734, and has been appointed District Deputy Grand Master of the 5th District of Manhattan.

He is also a past president of the Drug and Chemical Square Club, and the Drug Salesmen's Association of New York.

▸ Casper Smith, president of the Smith Chemical & Color Co., Inc., Brooklyn, N. Y., has announced the appointment of Kasey Youngentob as technical advisor and field representative. Mr. Youngentob studied chemistry at the University of Alabama after which he was associated with Joachim Research Laboratories. Subsequently he served with the Chemical Warfare Service at Fort Barrancas, Pensacola, Fla. Prior to assuming his present position he was associated with Valentine & Co. as chemist.

*Manufacturers of*

—AMERCHOL—

**ABSORPTION BASES**

for PHARMACEUTICAL and COSMETIC preparations

Our Absorption Bases possess inherent emollient and absorption properties because of their high free Cholesterol content.

- Facilitate the penetration and absorption of incorporated therapeutic agents.
- Recommended for ease of emulsification.
- Absorb unusually large amounts of water.
- Form pure white water-in-oil emulsions, completely stable under widely varied conditions.
- Form elegant products of rich texture and consistency.

*We also manufacture—*

**Cholesterol C. P., Emulsifiers, Ointment Bases, Industrial Penetrants, Softening and Dispersing Agents, and other Amerchol Products.**

AMERCHOL products are manufactured from specially processed Cholesterol and other sterols.

- Will not oxidize, nor turn rancid.
- Are unaffected by electrolytes.
- Retain their properties at extreme temperatures.
- Are for neutral, acid and alkaline creams, ointments and lotions.

**American Cholesterol Products**

Incorporated

MILLTOWN, NEW JERSEY

Sales Office—58 W. 40th St., New York 18, N. Y.

**WAVE SET**

**Powders and solutions are best preserved with 0.15%**

**CHEMOSOL**

**Let our laboratory prove it in your product**

**or ask for testing sample.**

**CHEMO PURO MFG CORP**

**48th Ave. & 5th St., Long Island City 1, N. Y.**

**REPLACEMENTS**

For

AROMATIC CHEMICALS

ESSENTIAL SPICE

and

FLOWER OILS

•

SOAP PERFUMES

ODOR MASKS

**SEELEY & CO.**

136 LIBERTY STREET NEW YORK 6, N. Y.

FACTORIES

FARMINGDALE, L. I., N. Y. NYACK, N. Y.

CONSOLIDATED

*Established 1858* **FRUIT JAR CO.**

NEW BRUNSWICK, NEW JERSEY

SHEET METAL GOODS : CORK TOPS : SPRINKLER TOPS : DOSE CAPS

*Founded 1854*

**FEZANDIE & SPERRLE, Inc.**

**205 Fulton Street, New York City**

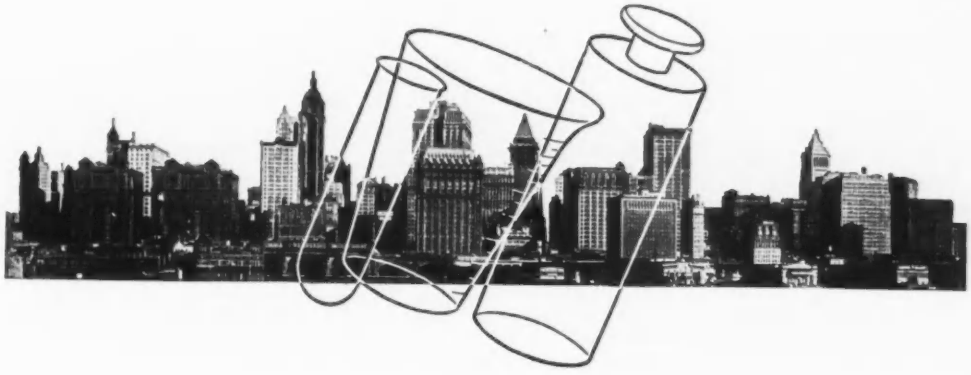
*HIGHEST STANDARD*

Colors and Dyes for Cosmetics, such as

| | |
|---|---|
| LIPSTICKS | PERFUMES |
| ROUGES | LOTIONS |
| FACE POWDERS | SHAMPOOS |
| MASCARA | CREAMS |
| SOAPS | Etc. |

•

*Your inquiries are invited*



# Arrival of Flavoring Materials

TRADE in the wholesale market for flavoring materials and other products used by perfumers, soap manufacturers and the toilet goods trade turned quieter toward the close of last month. In the face of so many shortages, the labor problem, and many other difficulties including containers, however, many wholesale houses more or less welcomed the slackening in activity.

### ARRIVAL OF ITALIAN LEMON OIL

Perhaps the most outstanding event was the arrival of some 100,000 pounds of Italian lemon oil. Outstanding because of the fact that it tended to lift the hopes of many in the industry that trade with Sicily is nearer to the point of being resumed than at any time since the outbreak of the war. Following the importation of the oil by the Government, private advices received here from houses in Sicily indicated that they are in a position to serve American firms as soon as shipping and the proper authority is extended to permit the exportation of oils to the United States.

### VANILLA BEAN SHIPMENT

Another encouraging feature in the market was the information received to the effect that the vanilla bean cargo of about 100 tons which had left Madagascar in the latter part of March for a South African port had finally been put aboard a steamer for the United States. The shipment, amounting to a million and a half dollars in value is about the only one expected for the balance of the year and it is not yet known whether additional lots can be obtained from Madagascar next spring. About 75 per cent of the cargo has been sold and it is likely that by the time the shipment arrives nearly all of the beans will go directly into consuming channels to complete orders. While more favorable prices are quoted on Mexican beans, the new and lower spot prices are not expected to continue in force for any great length of time since local houses explain that based on replacement costs, whole beans should bring at least $9 to $10 per pound. Mexican producers, it is pointed out, realize that the extract trade has been faced with many obstacles in obtaining beans from Madagascar, and that the possibility of obtaining regular replacements from the Island is still very uncertain.

### AROMATIC CHEMICAL MARKET

In the aromatic chemical market, makers are experiencing considerable difficulty in obtaining sufficient labor to carry on operations with the result that at no time since the war has material been so difficult to obtain. Unusual circumstances prevailing in many basic materials also tend to aggravate the situation. Citral, geraniol, thymol and linalool are but a few of the scarce chemicals. While current stocks of glycerine are considered of sufficient size to take care of all necessary requirements, major producers express some fear of a sudden shortage should the present conflict abroad suddenly come to an end. Great Britain and the United States are about the only countries which have glycerine. The liberation of Europe, it is believed, will bring about a tremendous world demand for this chemical which is likely to run into hundreds of tons. All fats and oils in Russia are being used for edible or lubricating purposes, and it is expected large quantities of glycerine will be required in France and other countries as soon as the war ends.

Announcement to the effect that the liquor trade would be allowed a holiday in August brought about a better inquiry in the wholesale markets for juniper berries, coriander seed, angelica and a few other articles that are used for flavoring. The inquiry soon faded, however, as buyers found such articles extremely scarce. Cinnamon leaf oil production in Ceylon is not likely to amount to more than 25 per cent of the prewar level because of a shortage of artificial fertilizer, and difficulty in obtaining labor.

### BRAZILIAN LEMON OIL

Maximum prices of $2.925 a pound for sales of imported lemon oil by Government agencies to dealers, and $3.25 per pound for dealers sales to industrial users and drug wholesalers as authorized by the OPA, effective June 15 immediately brought out numerous questions concerning Brazilian lemon oil since it is understood that fairly large quantities had been purchased for shipment at a cost of well over $4 per pound. It is understood that approximately 15 tons of lemon oil were produced in Brazil and that about four to five tons are earmarked for shipment to the United States. So far no ruling has been forthcoming.

Laboratory Bldgs., R. T. Vanderbilt Co., E. Norwalk, Conn.

# VEEGUM

*Magnesium Aluminum Silicate Gel*

*for*

Leg Make-up
Anti-Perspirants
Hand Creams
Tooth Pastes
Emulsions
Brushless Shaving Creams
Lather Shaving Creams

Protects Flavors . . . . Protects Perfumes
Stabilizes Emulsions

♦

Samples upon Request

♦

*Specialties Department*

**R. T. VANDERBILT CO., INC.**

230 Park Avenue • New York 17, N. Y.

# Stick to Your Colors

*Your colors are part of your Sales Appeal*

**We offer you our *SPRAYING—ENAMELING—and BAKING* services for work on**

***Compacts***
***Lipsticks***
***Closures of all types***
***Colors fused in on Bottles and Jars of all sizes***

***And any other items you may require***

**We also do:**

***Unremovable Lettering on any of the above items***

**All our work is Alcohol Proof**

## Jesselson Sales Associates

347 Fifth Ave., New York 16, N. Y.

## *FLAVORING CHEMIST*

**Leading Essential Oil House Requires Services of Chemist Having Complete Knowledge and Experience in the Production of Flavoring Materials. Wide and Varied Opportunity. Only Man with Long Practical Experience Will Be Considered . . . Write: Box 2486, The American Perfumer and Essential Oil Review**

## *Post War* COSMETICS

While we cannot accept any more orders now we will be glad to confer with you on your post war requirements.

Trece Laboratories

819 Broadway New York 3, N. Y.

**STABILIZED**

## Cold Wave SOLUTION

FINISHED AND READY TO USE
**7½% THIOGLYCOLLATE**
**CONSTANT pH OF 9 PLUS**
Will not turn pink when exposed to air
. . . shipped in gallons and barrels.
**UNLIMITED PRODUCTION**

**VACUUM DISTILLATION COMPANY**

**617 N. Kingshighway St. Louis 8, Mo.**

## *A NEW WHITE SACHET FILLER*

Made in fine ground wood powder—NEUTRAL COLOR.
Also fine ground aromatic red cedar powder.
Highly absorbent, retains scent.
Above grades are now being used in the cosmetic industry.
Always uniform—prompt shipment—no priorities needed.
**Sawdust for other purposes—special fine and coarse grades.**

***Ask for samples***

**NATIONAL SAWDUST CO. INC.**

**76 North 6th Street Brooklyn 11, N. Y.**

# PRICES IN THE NEW YORK MARKET

**(Quotations on these pages are those made by local dealers, but are subject to revision without notice)**

## ESSENTIAL OILS

| | | |
|---|---|---|
| Almond Bit, per lb. | 3.50@ | 4.00 |
| S. P. A. | 4.75@ | 5.10 |
| Sweet True | 1.55@ | 1.75 |
| Apricot Kernel | .56 | Nom'l |
| Amber, rectified | 2.25 | Nom'l |
| Angelica Root | 125.00@ | 150.00 |
| Anise, U. S. P. | 3.85 | Nom'l |
| Imitation | 1.75@ | 2.10 |
| Aspic (spike) Span. | 3.75@ | 4.00 |
| Avocado | .90@ | .95 |
| Bay | 1.45@ | 1.70 |
| Bergamot | 25.00 | Nom'l |
| Brazilian | 10.00@ | 10.25 |
| Artificial | 4.00@ | 9.25 |
| Birch, sweet | 3.35@ | 5.25 |
| Birchtar, crude | 2.25 | Nom'l |
| Birchtar, rectified | 4.25 | Nom'l |
| Bois de Rose | 5.00@ | 5.25 |
| Cade, N. S. P. | 1.00@ | 1.25 |
| Cajeput | 2.25@ | 3.00 |
| Calamus | 22.50@ | 35.00 |
| Camphor, "white," dom. | .35@ | .45 |
| Cananga, native | 10.75@ | 12.50 |
| Rectified | 15.00@ | 19.00 |
| Caraway | 17.50 | Nom'l |
| Cardamon | 28.00@ | 32.00 |
| Cassia, rectified, U. S. P. | 12.00 | Nom'l |
| Imitation | 3.75@ | |
| Cedar leaf | 1.35@ | 1.60 |
| U. S. P. | 2.65@ | 3.34 |
| Cedar wood | .85@ | .95 |
| Celery | 24.00@ | 26.00 |
| Chamomile | 150.00 | Nom'l |
| Cinnamon | 15.00@ | 32.00 |
| Citronella, Ceylon | 1.00@ | 1.10 |
| Java | 3.25 | Nom'l |
| Cloves, Zanzibar | 1.60@ | 1.70 |
| Copaiba | .85 | Nom'l |
| Coriander | 30.00@ | 32.00 |
| Imitation | 12.00@ | 14.00 |
| Croton | 3.75@ | 4.00 |
| Cubebs | 5.25 | Nom'l |
| Cumin | 8.25@ | 10.00 |
| Dillseed | 5.25@ | 5.50 |
| Erigeron | 2.25@ | 5.00 |
| Eucalyptus | 1.55 | Nom'l |
| Fennel, Sweet | 4.00 | Nom'l |
| Geranium, Rose, Algerian | 13.00@ | 15.00 |
| Bourbon | 15.00@ | 16.10 |
| Turkish | 4.75@ | 5.80 |
| Ginger | 21.00@ | 22.00 |
| Guaiac (Wood) | 4.50@ | 6.10 |
| Hemlock | 1.50 | Nom'l |
| Substitute | .55@ | .60 |
| Juniper Berries | 12.50@ | 16.00 |
| Juniper Wood, imitation | .75@ | .80 |
| Laurel | 5.00 | Nom'l |
| Lavandin | 8.25 | Nom'l |
| Lavender, French | 10.00@ | 12.00 |
| Lemon, Calif. | 3.25 | Nom'l |
| Lemongrass | 1.65@ | 1.80 |
| Limes, distilled | 7.00@ | 7.75 |
| Expressed | 11.00@ | 11.75 |
| Linaloe | 3.65@ | 4.00 |
| Lovage | 95.00 | Nom'l |
| Marjoram | 7.25@ | 7.50 |
| Neroli, Bigarde P. | 300.00@ | 375.00 |
| Petale, extra | 275.00@ | 340.00 |
| Olibanum | 5.00@ | 5.75 |
| Opopanax | 25.00@ | 38.00 |
| Orange, bitter | 4.50@ | 5.00 |
| Brazilian | 1.35@ | 1.50 |
| Calif., exp. | 1.75@ | |
| Orris Root, abs. (oz.) | 135.00@ | |
| Artificial | 36.00@ | 40.00 |
| Pennyroyal, Amer. | 4.00@ | 4.10 |
| European | 4.00 | Nom'l |
| Peppermint, natural | 7.50@ | |
| Redistilled | 8.05@ | |
| Petitgrain | 1.70@ | 2.00 |
| Pimento | 5.25@ | 8.00 |
| Pinus Sylvestris | 4.25@ | 5.00 |
| Pumillonis | 4.25 | Nom'l |
| Rose, Bulgaria (oz.) | 25.00@ | 32.00 |
| Synthetic, lb. | 45.00@ | 55.00 |
| Rosemary, Spanish | 2.00@ | 2.10 |
| Sage | 5.85@ | 6.50 |
| Sage, Clary | 35.00 | Nom'l |
| Sandalwood, East India | 6.75 | Nom'l |
| Sassafras, natural | 2.10@ | 2.35 |
| Artificial | 1.50@ | 1.80 |
| Snake root | 12.00 | Nom'l |
| Spearmint | 4.00 | Nom'l |
| Thyme, red | 2.60@ | 3.25 |
| White | 3.25@ | 5.00 |
| Valerian | 40.00 | Nom'l |
| Vetivert, Java | 50.00 | Nom'l |

(Continued on page 99)

René Forster Company

Fine Aromatic Chemicals

Essential Oils Specialties

404 Fourth Ave. New York 16, N.Y.

Murray Hill 5-0250

# PROFESSIONAL SERVICE


**CHARLES S. GLICKMAN**
*and Associates*
**CONSULTING CHEMISTS**
Industrial Protective Creams . . . Synthetic Waxes and Esters . . . Raw Material Substitutes
39 West 38th St., N. Y. C., Wis. 7-8671

**GEORGE W. PEGG Ph. C.**
Consultant
Cosmetics—Drugs—Industrial Alcohol—Flavoring Extracts
Labeling—Advertising—Formulas
152 W. 42nd St., N. Y. 18, N. Y. Tel.: Wisconsin 7-3066
Washington address: 2121 Virginia Ave. N.W.,
Washington 7, D.C., c/o Dr. George W. Hoover

**FIFTH AVENUE PROTECTIVE ASS'N**
220 Fifth Avenue, New York City
38 Years of RESULT PRODUCING Service Proves Our Worth
***The "TRADES" Recognized CREDIT and COLLECTION AGENCY.***


# CLASSIFIED ADVERTISEMENTS

***The rates for advertisements in this section are as follows: Business Opportunities, $1.00 per line per insertion. Situations Wanted and Help Wanted, 50c per line per insertion. Please send check with copy. Address all communications to THE AMERICAN PERFUMER, 9 East 38th St., New York.***

### BUSINESS OPPORTUNITY

WANTED: 2—Dry Powder Mixers; 2—Pony Mixers; 2—Tablet Machines; 1—Filter; 3—Kettles; 2—Filling Machines. No dealers. Write Box 2353, The American Perfumer and Essential Oil Review.

### BUSINESS OPPORTUNITY

Lines Wanted

West African Distributor serving the cosmetics, soaps, perfumes and flavors trade in West Africa is prepared to negotiate for Co-operative Export Selling Agency. Can handle twelve assorted manufactures. Remuneration by salary and bonus. Address your correspondence to Olayimika Fasanya, 14, Artesian Road, Bayswater, London, W.2.

NAILING MACHINE WANTED: We want used Morgan or Doig wood box Nailing Machines at once. State make, size, best cash price. Chas. N. Braun Machinery Co., Fort Wayne, Indiana.

### A NEW PERFUME!

Will negotiate, outright, or on royalty basis, a Truly New Perfume Creation. New in its odor character proper and formulation as well as in its timely "romantic" appeal and name. Write Box 2484, The American Perfumer and Essential Oil Review.

CLOSEOUTS: Soap, Powder, Perfumes, Tooth Paste and Powder, Shaving Creams, Brushes, any style. Kroy Sales Co., 9 East 17th Street, New York 3, N. Y.

OLD ESTABLISHED CANADIAN distributor of raw materials, covering all of Canada with warehouses in Montreal and Toronto desires to represent progressive American manufacturers of essential oils, perfume bases, aromatics, white oils, lanolin, flavors and allied products. Will handle non competing lines only. Can give unusual service. H. L. Blachford Ltd., 977 Aqueduct St., Montreal, Canada.

What's your trouble? Cosmetic Chemist long experience can Help you. Creams, Lotions, Perfumes, Beauty Supply Products. Tell me what you want and I will send you finished samples and price of formulas before you buy. Cosmetic Chemist—611-705 Olive Street, St. Louis 1, Missouri.

### HELP WANTED

CHEMIST OR TECHNICIAN: An experienced rouge man is required either full or part time employment. Reply by letter stating experience, age and academic background. Write Box 2489, The American Perfumer and Essential Oil Review.

CHIEF CHEMIST: For perfume and cosmetic manufacturer. Ph.d necessary. Able to take charge of complete staff of analyses chemists and do extensive research work. Write Box 2490, The American Perfumer and Essential Oil Review.

### SITUATION WANTED

CHEMICAL ENGINEER: Eight years' experience in cosmetic plant management. Work included production and operation, packaging and bottling, maintenance, purchasing and inventory control. Seeking similar position where this background can be used to maximum mutual benefit. Draft deferred. Can obtain release. Write Box 2466, The American Perfumer and Essential Oil Review.

AVAILABLE for Position: master perfumer with 30 years' experience in the creation and matching of fine perfumes and compounds from basic raw materials; designing packages, bottles and labels; merchandising and advertising. Thoroughly experienced in all phases of manufacture of perfumes and toiletries. Write Box 2470, The American Perfumer and Essential Oil Review.


**BUY WITH CONFIDENCE – GET WITHOUT DELAY**

2—Day Auger type Powder Fillers.
1—Pneumatic Scale 6 head, automatic Capper, m.d.
2—Karl Kiefer rotary 18 spout hand Fillers.
1—Semi-automatic Labeling Machine.
1—Pneumatic Scale Talcum Powder Filler and Cappers, Unit complete.
4—Monel Open Tanks, 25 gal.
5—Dry Powder Mixers, from 50 to 2000 lbs.
20—Aluminum, Copper, Glass Lined, jacketed and agitated Kettles.
1—Abbe Blutergess sifter #2.
2—Colton #3 Toggle Presses.
3—Stokes Steam Water Stills, 5, 10, 25 gal. per hour.

***Only a partial listing. Send us your inquiries.***

FOR 25 YEARS A SYMBOL OF CONFIDENCE
We buy and sell from a Single Item to a Complete Plant
**CONSOLIDATED PRODUCTS CO., INC.**
14-15 Park Row, New York, N. Y., Shops: 335 Doremus Ave., Newark, N. J.

(Continued from page 97)

| | | |
|---|---|---|
| Wintergreen | 5.25@ | 8.50 |
| Wormseed | 5.25 | Nom'l |
| Ylang Ylang, Manila | 38.00 | Nom'l |
| Bourbon type | 18.00@ | 20.00 |

### TERPENELESS OILS

| | | |
|---|---|---|
| Bay | 2.75@ | 3.00 |
| Bergamot | 49.00 | Nom'l |
| Grapefruit | 65.00@ | |
| Lavender | 28.00 | Nom'l |
| Lemon | 40.00@ | 55.00 |
| Lime, ex. | 80.00@ | 100.00 |
| Distilled | 60.00@ | 67.00 |
| Orange sweet | 57.00@ | 100.00 |
| Peppermint | 13.00@ | 13.25 |
| Petitgrain | 3.75@ | 4.00 |
| Spearmint | 5.00@ | 6.00 |

### DERIVATIVES AND CHEMICALS

| | | |
|---|---|---|
| Acetaldehyde 50% | 1.90@ | 2.75 |
| Acetophenone | 1.60@ | 1.75 |
| Alcohol C 8 | 7.50 | Nom'l |
| C 9 | 14.00 | Nom'l |
| C 10 | 7.75@ | 12.00 |
| C 11 | 11.50 | Nom'l |
| C 12 | 7.20@ | 8.50 |
| Aldehyde C 8 | 22.50@ | 28.00 |
| C 9 | 32.00 | Nom'l |
| C 10 | 22.00@ | 29.00 |
| C 11 | 22.00 | Nom'l |
| C 12 | 25.00@ | 30.00 |
| C 14 (so called) | 9.25@ | 9.75 |
| C 16 (so called) | 7.65@ | 8.25 |
| Amyl Acetate | .50@ | .75 |
| Amyl Butyrate | .90@ | 1.10 |
| Amyl Cinnamate | 4.50@ | 5.80 |
| Amyl Cinnamate Aldehyde | 2.75@ | 5.00 |
| Amyl Formate | 1.00@ | 1.75 |
| Amyl Phenyl Acetate | 3.75@ | 4.00 |
| Amyl Salicylate | .85@ | 1.00 |
| Amyl Valerate | 2.00@ | 2.75 |
| Anethol | 2.75@ | 2.85 |
| Anisic Aldehyde | 3.15@ | 4.00 |
| Benzophenone | 1.15@ | 1.30 |
| Benzyl Acetate | .65@ | 1.00 |
| Benzyl Alcohol | 1.25@ | 2.00 |
| Benzyl Benzoate | 1.10 | Nom'l |
| Benzyl Butyrate | 2.25@ | 3.00 |
| Benzyl Cinnamate | 5.15 | Nom'l |
| Benzyl Formate | 2.50@ | 3.00 |
| Benzyl-Iso-eugenol | 10.25 | Nom'l |
| Benzylidenacetone | 2.25@ | 3.40 |
| Borneol | 1.80 | Nom'l |
| Bornyl Acetate | 2.00 | Nom'l |
| Bromstyrol | 5.00 | Nom'l |
| Butyl Acetate | .11@ | 14½ |
| Cinnamic Acid | 3.75@ | 4.50 |
| Cinnamic Alcohol | 3.75@ | 4.00 |
| Cinnamic Aldehyde | 1.75 | Nom'l |
| Cinnamyl Acetate | 10.40@ | 12.00 |
| Cinnamyl Butyrate | 12.00@ | 14.00 |
| Cinnamyl Formate | 10.00@ | 13.00 |
| Citral, C. P. | 3.85@ | 4.25 |
| Citronellol | 6.50@ | 7.00 |
| Citronellyl Acetate | 8.60@ | 9.20 |
| Coumarin | 3.00@ | 3.50 |
| Cuminic Aldehyde | 8.00@ | 11.25 |
| Diethylphthalate | .24 | Nom'l |
| Dimethyl Anthranilate | 4.55@ | 5.00 |
| Ethyl Acetate | .25 | Nom'l |
| Ethyl Anthranilate | 5.75@ | 7.50 |
| Ethyl Benzoate | .90@ | 1.15 |
| Ethyl Butyrate | .75@ | .90 |
| Ethyl Cinnamate | 3.25@ | 3.75 |
| Ethyl Formate | .60@ | 1.00 |
| Ethyl Propionate | .80 | Nom'l |
| Ethyl Salicylate | .90@ | 1.00 |
| Ethyl Vanillin | 5.25@ | 6.00 |
| Eucalyptol | 2.75 | Nom'l |
| Eugenol | 2.90@ | 3.25 |
| Geraniol, dom. | 5.00@ | 6.00 |
| Geranyl Acetate | 4.00 | Nom'l |
| Geranyl Butyrate | 8.20@ | 8.50 |
| Geranyl Formate | 9.25@ | 10.00 |
| Heliotropin, dom. | 6.00 | Nom'l |
| Hydrotopic Aldehyde | 15.00@ | 18.00 |
| Hydroxycitronellal | 7.75@ | 10.00 |
| Indol, C. P. | 23.00@ | 26.50 |
| Iso-borneol | 1.00@ | 1.10 |
| Iso-butyl Acetate | 1.25@ | 2.00 |
| Iso-butyl Benzoate | 1.50@ | 2.60 |
| Iso-butyl Salicylate | 2.70@ | 3.00 |
| Iso-eugenol | 4.00@ | 4.85 |
| Iso-safrol | 3.00 | Nom'l |
| Linalool | 7.50@ | 8.00 |
| Linalyl Acetate 90% | 7.00@ | 8.75 |
| Linalyl Anthranilate | 15.00@ | |
| Linalyl Benzoate | 10.50@ | |
| Linalyl Formate | 9.00@ | 12.00 |
| Menthol, Brazilian | 16.50@ | |
| Methyl Acetophenone | 1.80 | Nom'l |
| Methyl Anthranilate | 2.75@ | 3.00 |
| Methyl Benzoate | .70@ | 1.10 |
| Methyl Cellulose, f.o.b. shipping point | .60 | Nom'l |
| Methyl Cinnamate | 2.25@ | 3.50 |
| Methyl Eugenol | 3.50@ | 6.75 |
| Methyl Heptenone | 3.25 | Nom'l |
| Methyl Heptine Carbonate | 40.00@ | 60.00 |
| Methyl Iso-eugenol | 5.85@ | 10.00 |
| Methyl Octine Carbonate | 24.00@ | 30.00 |
| Methyl Paracresol | 2.50 | Nom'l |
| Methyl Phenylacetate | 3.75@ | 4.00 |
| Methyl Salicylate | .35@ | .38 |
| Musk Ambrette | 9.50 | Nom'l |
| Ketone | 4.50@ | 9.70 |
| Xylene | 1.65@ | 2.50 |
| Neroline (ethyl ether) | 2.00@ | 3.15 |
| Paracresol Acetate | 2.50@ | 3.00 |
| Paracresol Methyl Ether | 2.60 | Nom'l |
| Paracresol Phenyl-acetate | 6.50@ | 8.50 |
| Phenylacetaldehyde 50% | 3.00@ | 3.35 |
| 100% | 4.50@ | 5.00 |
| Phenylacetic Acid | 3.00@ | 3.75 |

(Continued on page 101)


# ISOPROPYL ALCOHOL

*available for*

**SHAMPOOS:** Isopropyl Alcohol aids in cleaning hair and scalp thoroughly and in leaving hair soft and lustrous.

**HAIR AND SCALP PREPARATIONS:** Isopropyl Alcohol as a vehicle for hair and scalp preparations aids the cleansing and antiseptic value of the tonics.

**STERILIZING SOLUTIONS:** 40% Isopropyl Alcohol will kill dried Bacillus Coli in ¼ minute. 50% Isopropyl Alcohol is equivalent to 70% ethyl alcohol for killing Bacillus streptococcus and staphlococcus.

**BODY RUBS:** Isopropyl Alcohol evaporates slowly, thereby prolonging the cooling effect when used in body rubs. Isopropyl Alcohol has no denaturants.

**FACE AND HAND LOTIONS:** Isopropyl Alcohol evaporates slowly; has little tendency to dry the skin, and aids in keeping the skin soft.

**AFTER SHAVE LOTION:** Isopropyl Alcohol is excellent for this product because it aids the after-cooling and skin-freshening qualities of the lotion.

*Use 91% Isopropyl Alcohol and Release War Materials*

STANDARD ALCOHOL COMPANY

26 BROADWAY NEW YORK 4, N. Y.

# INDEX TO ADVERTISERS


Allied Products, Inc. ..... 60
Aluminum Seal Company ..... —
American Cholesterol Products, Inc. ... 94
Ansbacher-Siegle Corp. ..... —
Aromatic Products, Inc. ..... —
Atlantic Refining Co., The ..... 70

Baker & Bros., H. J. ..... 70
Bender Corp., The ..... 102
Bopf-Whittam Corporation ..... —
Bridgeport Metal Goods Mfg. Co., The 86
Broder, Harry ..... 22
Bush & Co., Inc., W. J. ..... 1
Bush Aromatics, Inc. ..... 80

California Fruit Growers Exchange .... 4
Camilli, Albert & Loloue ..... 2
Carr-Lowery Glass Co. ..... 8
Chemo Puro Mfg. Corp. ..... 94
Chiris Co., Inc., Antoine ..... 56
Classified Advertisements ..... 98
Consolidated Fruit Jar Co. ..... 94
Consolidated Products Co., Inc. ..... 98
Continental Chemical Co. ..... 88
Cortizas Co., M. ..... 73
Cosmia Laboratories ..... 100
Creative Printmakers Group ..... 86

Danco, Inc., Gerard J. ..... 72
De Laire, Fabriques ..... 5
Dodge & Olcott Co. ..... 5
Dow Chemical Co., The
58 and Inside Back Cover
Dreyer, Inc., P. R ..... 88
Drury & Co., Inc., A. C. ..... 70
Duval, Compagnie ..... 74

Evans Chemetics, Inc ..... 13
Evans Chemicals Limited ..... 13

Felton Chemical Co., Inc. ..... 32
Fezandie & Sperrle, Inc. ..... 94
Firmenich & Co. ..... Back Cover
Florasynth Laboratories, Inc. ..... 19

Forster, René ..... 97
Fritzsche Bros., Inc.,
Insert Pages 9-10-11-12
Furlager Mfg. Co., Inc ..... 20

General Drug Co ..... 14
Givaudan-Delawanna, Inc.,
Insert Pages 54-55
Glass Industries, Inc. ..... 100
Goldschmidt Corp., The ..... 21

Harkness & Cowing Co., The ..... 70
Hazel Atlas Glass Co. ..... —
Helfrich Laboratories, Inc ..... 3
Horner, Inc., James B. ..... —

Innis, Speiden & Company ..... 82
Interstate Color Co. ..... 88

Jesselson Sales Associates ..... 96

Kelton Cosmetic Co. ..... 92
Kiefer Machine Co., The Karl ..... 62
Kimble Glass Co. ..... 26
Krause, Richard M ..... 88

Laco Products, Inc ..... 70
Lautier Fils, Inc. ..... 84
Leeben Chemical Co., Inc. ..... 73
Leonhard Wax Co., Inc, Theodor ..... 100
Lueders & Co., George ..... 2

Magnus, Mabee & Reynard, Inc ..... —
Maryland Glass Corp. ..... —
Merck & Co., Inc. ..... —
Mero, J., and Voyveau ..... 5
Meyercord Co., The ..... —

National Oil Products Co ..... —
National Sawdust Co., Inc ..... 96
Naugatuck Aromatics ..... 64
New England Collapsible Tube Co ..... 30
Norda Essential Oil & Chemical Co., Inc. ..... 24
Northwestern Chemical Co., The ..... 87

Owens-Illinois Glass Co ..... —
Orbis Products Corp ..... —

Oxzyn Company ..... 16

Parento, Inc., Compagnie ..... 66
Parfumeries de Sellians,
Insert Pages 9-10-11-12
Paris Cosmetics, Inc ..... 20
Parsons, M. W. ..... 89
Pennsylvania Refining Co ..... 92
Plumly Co., Eugene K. ..... 86
Polak & Schwarz, Inc. ..... 53
Powell & Co., Inc., John ..... 74

Ritchie & Co., W. C. ..... 15
Rodex Laboratories ..... 84
Roure-Du Pont, Inc ..... 28

Sanderson & Sons, W. ..... 5
Schimmel & Co., Inc. ..... 68
Seeley & Company ..... 94
Sherwood Refining Company, Inc ..... 81
Sierra Talc Co. ..... 70
Sparhawk Co. ..... 102
Standard Alcohol Company ..... 99
Standard Specialty & Tube Co. ..... —
Standard Synthetic Co. ..... —
Swindell Bros. ..... 25
Syntomatic Corp. ..... 23

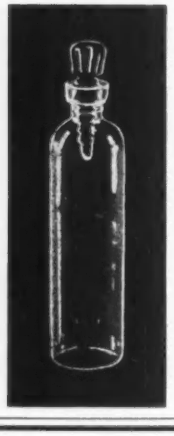
Thurston & Braidich ..... 70
Tombarel Fréres ..... 82
Tombarel Products Corp. ..... 82
Trece Laboratories ..... 96
Turner White Metal Co., Inc. ..... 84

Ungerer & Co. ..... Inside Front Cover
U. S. Industrial Chemicals, Inc.,
Insert Pages 77-78

Vacuum Distillation Co. ..... 96
Van Ameringen-Haebler, Inc. ..... 6-7
Vanderbilt Co., Inc., R. T ..... 96
Van Dyk & Co., Inc. ..... 91
Verley and Company, Albert ..... 17
Voss, Corporation, Karl ..... 92

Will & Baumer, Candle Co., Inc. ..... 80
Wirz, Inc., A. H. ..... Front Cover





**VIALS**

with Interchangeable Screw Stoppers (Pat.)

**IN SIZES**

**1 dr., ¼ oz., ½ oz., and 1 oz.**
**Available Now—Also**

**MINIATURE BOTTLES**

*Limited Selection*

**Information Gladly Furnished Upon Request**

**SEALTIGHT**

The Original Capping Material For Sealing Bottles or Vials

—stops leakage, evaporation
—fills every airhole or space between stopper and bottle neck
—is colorless and odorless
—is transparent, easily removed
—is not affected by alcohol or other solvent

Sold in 1 lb. containers. Price per lb. $2.50. Refuse imitations, buy the original, in use 20 years.

**GLASS INDUSTRIES, INC.**

10 West 33rd St., New York 1, N. Y.

EXCLUSIVE
PRIVATE BRAND
COSMETICS

COSMIA

**COSMIA LABORATORIES**
95 MADISON AVE. NEW YORK 16, N. Y.

**TL Beeswax**

- PURE WHITE
- EXTRA QUALITY
- ABSOLUTELY PURE
- ABOVE U.S.P. STANDARDS

● Samples will gladly be sent on request—at no obligation.

*Serving The Trade For 92 Years*

**THEODOR LEONHARD WAX CO., INC.**
HALEDON, PATERSON NEW JERSEY

Western Distributor: A. C. Drury & Co., 218 E. North Water St., Chicago, Ill.

(Continued from page 99)

| | | |
|---|---|---|
| Phenylethyl Acetate | 2.50@ | 4.10 |
| Phenylethyl Alcohol | 2.50@ | 3.00 |
| Phenylethyl Anthranilate | 16.00@ | |
| Phenylethyl Butyrate | 3.75@ | 4.25 |
| Phenylethyl Propionate | 3.50@ | 4.75 |
| Phenyl Formate | 12.50@ | 18.00 |
| Phenyl Valerianate | 16.00@ | 17.50 |
| Phenylpropyl Acetate | 8.00@ | 10.00 |
| Santalyl Acetate | 20.00@ | 22.50 |
| Scatol, C. P. (oz.) | 5.35@ | 6.00 |
| Styrolyl Acetate | 2.50@ | 3.00 |
| Styrolyl Alcohol | 9.25@ | 12.00 |
| Vanillin (clove oil) | 2.60 | Nom'l |
| (guaiacol) | 2.35 | Nom'l |
| Lignin | 2.35 | Nom'l |
| Vetivert Acetate | 25.00 | Nom'l |
| Violet Ketone Alpha | 18.00 | Nom'l |
| Beta | 15.00 | Nom'l |
| Methyl | 6.50 | Nom'l |
| Yara Yara (methyl ester) | 2.00@ | 3.10 |

## BEANS

| | | |
|---|---|---|
| Tanka Beans, Surinam | .70@ | .95 |
| Angostura | 2.40@ | 2.75 |
| Vanilla Beans | | |
| Mexican, whole | 8.50@ | 9.00 |
| Mexican, cut | 7.50@ | 8.00 |
| Bourbon | 9.50@ | 10.50 |
| Tahiti | 3.75@ | 4.00 |

## SUNDRIES AND DRUGS

| | | |
|---|---|---|
| Acetone | .8½@ | .09 |
| Almond meal | .25@ | 35 |
| Ambergris, ounce | 13.50@ | 18.50 |
| Balsam, Copaiba | .60@ | .75 |
| Peru | 1.00@ | 1.10 |
| Beeswax, bleached, pure | | |
| U. S. P. | .58 | Nom'l |
| Yellow, refined | .53½ | Nom'l |
| Bismuth, sub-nitrate | 1.20@ | 1.22 |
| Borax, crystals, carlot ton | 55.50@ | 58.00 |
| Boric Acid, U. S. P., cwt. | 6.95@ | 7.55 |
| Calamine | .18@ | .20 |
| Calcium, phosphate | .08@ | .08¾ |
| Phosphate, tri-basic | .09@ | .10 |
| Camphor, domestic | .69@ | .84 |
| Castoreum | 13.00@ | 17.00 |
| Cetyl Alcohol | 1.75 | Nom'l |
| Pure | 2.25 | Nom'l |
| Chalk, precip. | .03½@ | .06½ |
| Cherry Laurel Water, jug, gal. | 3.60@ | 4.00 |
| Citric Acid | .21 | Nom'l |
| Civet, ounce | 22.00@ | 28.00 |
| Clay, colloidal | .07@ | .15 |
| Cocoa Butter, lump | .25½@ | .27 |
| Cyclohexanol (Hexalin) | .30@ | .50 |
| Fuller's Earth, ton | 15.00@ | 33.00 |
| Glycerin, C. P., drums | .18¼@ | .18¾ |
| Gum Arabic, white | .42@ | .45 |
| Amber | .12¾@ | .14 |
| Powdered, U.S.P. | .19@ | .21 |
| Gum Benzoin, Siam | 5.00 | Nom'l |
| Sumatra | 1.35@ | 1.40 |
| Gum Galbanum | 1.80@ | 2.00 |
| Gum Myrrh | .50@ | .55 |
| Henna, pwd. | .30@ | .35 |
| Kaolin | .05@ | .07 |
| Labdanum | 3.25@ | 5.00 |
| Lanolin, hydrous | .35@ | .36 |
| Anhydrous | .36@ | .37 |
| Magnesium, carbonate | .09@ | .10¾ |
| Stearate | .24@ | .27 |
| Musk, ounce | 50.00 | Nom'l |
| Olibanum, tears | .18@ | .35 |
| Siftings | .11½@ | .13 |
| Orange Flower Water, gal. | 1.75@ | 2.25 |
| Orris Root, African, pwd. | 1.10@ | 1.15 |
| Paraffin | .06¼@ | .09 |
| Peroxide | 1.10@ | 1.75 |
| Petrolatum, white | .06¼ | .08½ |
| Quince Seed | 1.75@ | 2.00 |
| Rice Starch | .10 | Nom'l |
| Rose Leaves, red | 3.50@ | 4.00 |
| Rose Water, gal. | 6.50@ | 8.00 |
| Rosin, M. per cwt. | 7.00@ | |
| Salicylic Acid | .35@ | .40 |
| Saponin | 2.00@ | 2.50 |
| Silicate, 40°, drums, works, 100 pounds | .80@ | 1.20 |
| Soap, neutral, white | .20@ | .25 |
| Sodium Carb. 58% light, 100 pounds | 1.35@ | 2.35 |
| Hydroxide, 76% solid, 100 pounds | 2.60@ | 3.75 |
| Spermaceti | .26@ | .27 |
| Stearate Zinc | .30@ | .31 |
| Styrax | 1.40@ | 1.60 |
| Tartaric Acid | .64 | Nom'l |
| Tragacanth, No. 1 | 4.85@ | 5.00 |
| Triethanolamine | .34½ | Nom'l |
| Violet Flowers | 1.75@ | 2.00 |
| Zinc Oxide, U. S. P. bbls. | .10½ | .10¾ |

## OILS AND FATS

| | | |
|---|---|---|
| Castor No. 1, tanks | .13@ | |
| Cocoanut, Manila Grade, c.i.f., tanks | .0835@ | |
| Corn, crude, Midwest, mill, tanks | .12¾@ | |
| Corn Oil, distilled, drums | .16¼@ | .16½ |
| Cotton, crude, Southeast, tanks | .12¾@ | |
| Grease, white | .08⅞@ | |
| Lard | .1380@ | |
| Lard Oil, common, No. 1 bbls. | .14@ | |
| Palm, Niger, drums | .0865 | |
| Peanut, blchd., tanks | .15@ | |
| Red Oil, distilled, tanks | .12½@ | |
| Stearic Acid | | |
| Triple Pressed | .18⅝@ | .19⅝ |
| Double Pressed | .15⅞@ | .16⅞ |
| Tallow, acidless, barrels | .14¼@ | |
| Tallow, N. Y. C., extra | .08⅝@ | |
| Whale oil, refined | .1232 | Nom'l |


# PRODUCTION MAN WANTED

A well-established, quality perfume and cosmetic house seeks the services of an able production and purchasing manager. Job consists of supervising laboratory work and packaging all items sold under a well-known trademark. Previous experience required. Liberal compensation and opportunity for still further advancement. Write fully stating background, past experience and all relevant facts. Information will be held in strict confidence.

**BOX # 2488, AMERICAN PERFUMER, NEW YORK**

*(Our employees know of this ad)*

NOTE OF SPRING — A VIOLET BASE

A NATURAL OIL PRODUCT

# Violin

*The Voice of Nature is akin*
*To the dulcet tones of VIOLIN*

THE ARTIST & DREAMER merges his SOUL in his VIOLIN! With it he ranges from fiery Gypsy Rhapsodies to the subtle Humoresque and Ave Maria. His violin pulls our heart strings, lets loose our tears—brings forth our laughter and restores our years.

Where can one duplicate such a Master Instrument! It sobs, it murmurs. It also shrieks and screams with delirious laughter and exquisite joy. It runs—dances, setting our feet in motion, our bodies swaying.

JUST SO—VIOLIN! In the hands of the ARTISTIC Perfumer it produces fragrant Melodies and Harmonies, reaching new HORIZONS and FRESH FIELDS of distinctive Perfumes.

Those desiring original compositions should investigate VIOLIN.

**SPARHAWK CO.** SPARKILL, N. Y., U. S. A.

THE **BENDER** CORP.

*Manufacturing Chemists Since 1922*

Toilet Water • Cologne • Perfume

BULK AND PRIVATE LABEL

•

*PLANTS IN*

NEWARK, N. J. • EAST ORANGE, N. J. • SAN JUAN, PUERTO RICO

*Inquiries Solicited*

*Address all correspondence to East Orange, N. J.*

# Production Control and the Analysis of Cosmetics

by MAISON G DENAVARRE, Ph.C., B.S.

*Technical Editor of the American Perfumer & Essential Oil Review and of Elaboraciones y Envases, Special Lecturer in Cosmetics, Wayne University, College of Pharmacy, Consulting Chemist*

Fifth Installment.

The fourth installment was published in the preceding issue. Subsequent installments will appear in forthcoming issues.

ACKNOWLEDGMENTS

"Permission to use for comment parts of the text of the National Formulary, Seventh Edition, in this volume has been granted by the Committee on Publications by authority of the Council of the American Pharmaceutical Association."

"The use in this volume of certain portions of the text of the United States Pharmacopoeia, Twelfth Revision, official November 1, 1942, and of Supplement 1 to the U.S.P. XII, official November 1, 1942, is by virtue of permission received from the Board of Trustees of the United States Pharmacopoeial Convention. The said Board of Trustees is not responsible for any inaccuracy of quotation nor for any errors in the statement of quantities or percentage strengths."

Permission to use certain portions of the "Official and Tentative METHODS OF ANALYSIS of the A.O.A.C." in this volume is granted by the Association of Official Agricultural Chemists. The said Association is not responsible for any inaccuracy of quotation nor for any errors in statement of any quantities or percentages.

Permission to use certain portions of the TOILET GOODS ASSOCIATION Specifications has been granted by the Toilet Goods Association, Inc. The said Association is not responsible for any inaccuracy of quotation nor for any errors in statement of any quantities or percentages.

Permission to use certain portions of the METHODS OF ANALYSIS of the A. A. T. C. C. 1940 Year Book in this volume is granted by the Association American Textile Chemists and Colorists, hereafter referred to as A. A. T. C. C. The said Association is not responsible for any inaccuracy of quotation nor for any errors in statement of any quantities or percentages.

Permission to use certain portions of the Official and Tentative METHODS OF ANALYSIS of the A.O.C.S. in this volume is granted by the American Oil Chemists' Society, hereinafter referred to as A.O.C.S. The said Association is not responsible for any inaccuracy of quotation nor for any errors in statement of any quantities or percentages.

CHAPTER IV

*(continued)*

## Physical and Chemical Testing Gravimetric and Volumetric Methods

### P-33—DILUTION RATIO

*(U. S. Industrial Chemicals Co. Method)*

Dry RS ½ second nitrocellulose is used. This is obtained by air drying wet RS ½ second nitrocellulose overnight at room temperature and then for one-half hour in an oven at 45°-50°C. The toluol used is the commercial 2° toluol, and the petroleum hydrocarbon is a commercial product with a boiling range between 80° and 150°C generally known to the trade as Lactol Spirits, B.W. Solvent No. 1, Solvent Naphtha No. 55, etc.

PROCEDURE

Five grams of the dry RS ½ second nitrocellulose are placed in a 125 cc Erlenmeyer flask and sufficient solvent sample is measured into the flask so that after diluting, the contents will contain between 7 and 9% nitrocellulose.

The flask is then allowed to stand overnight to dissolve the nitrocellulose. After solution is complete, the diluent is added slowly from a burette, shaking the flask to mix in the diluent thoroughly, until the endpoint is reached. The endpoint for toluol is taken as that point where the contents of the flask will set to a gel on standing for two minutes, or when the gelled nitrocellulose will settle to the bottom of the flask after standing for two minutes. The endpoint for the petroleum hydrocarbon is taken as that point where a turbidity is obtained equivalent to that of 0.150 gm of "Celite Filter Aid" in 500 cc of water.

The dilution ratio as reported is the value obtained by dividing the volume of diluent used by the volume of solvent taken.

#### P-34—DISPERSION RATE

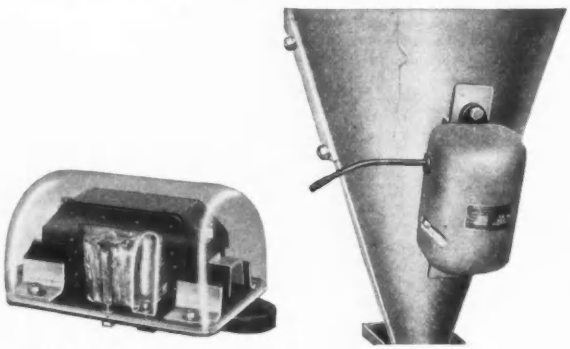
All suspended matter tends to settle at the bottom of the bottle or jar. If properly formulated, shaking redisperses the solids. Some suspensions require a lot of shaking while others take less. The amount of shaking required is an important criterion.

Thoroughly agitate two units of the product to be tested. Let one stand on a shelf for 1 week, then note the number of shakes (with the hand) it takes to bring the total into suspension. Or, shake exactly 25 times (or some other definite number of times) and observe if the sample is completely dispersed. Repeat with the second sample, using 5 less shakes and observe.

To the second set of two samples, place on a vibrating platform, and allow to set for 2 days. Remove from vibrator and determine the number of shakes required to suspend, as above.

The vibrator may be a regular commercial model (Figure 64) of which there are quite a few, or it may be rigged up from an ordinary buzzer, hooked on to a metal platform suitably fenced in to keep the bottles on it.

The vibration-dispersion test will simulate settling encountered as a result of transportation, since vibration tends to form hard cakes in the settled matter more so than settling by gravity while undisturbed.



V-9 and V-15 Vibrators  Vibrator on Hopper

Figure 64. Pulsating Magnet Electric Vibrators with Rheostat Controlled Power

#### P-35—DRY MASS OR OVERTONE

Place a small heap of standard powder alongside a heap of the shade being made. Force the two heaps together but do not mix, so there is a line of demarcation. Press both down at the same time using a wide spatula. Observe the mass tone for variation. This is also called *box tone*.

#### P-36—DRY PAPER COLOR

Take a small amount of the powder and place on a piece of good quality white rag paper. Using the forefinger, rub in a circle while pressing down firmly until no further color develops. Compare with the standard.

#### P-37—APPARATUS FOR RAPID DRYING

*(Martin Burger, Chemist Analyst, 32, No. 4, 92, 1943)*

The accompanying diagram (Figure 65) shows an apparatus of the Abderhalden type. *A* is a test-tube, 50 × 150 mm to which tubes *A* and *B* are joined by simple glass blowing. *B* is a test-tube, 16 × 150 mm, which fits into *A* through a one-hole rubber or cork stopper. *C* is a water-cooled condenser which condenses the vapor coming from the flask *E*. *D* is a 100 or 200 ml round bottom flask containing $P_2O_5$ desiccant.

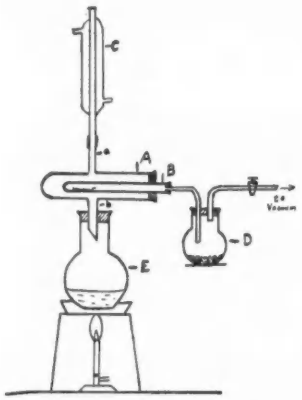



Figure 65. Rapid Drying Apparatus

In operation, the sample to be dried is placed in a small boat or other receptacle which is then introduced into tube *B*. Flask *D* is connected to this tube, as shown in the diagram, and then evacuated. Some suitable liquid, such as carbon tetrachloride, ethyl alcohol, water or toluol, is brought to boiling in flask *E*. The hot vapors surround the tube *B* containing the sample to be dried and, on reaching the condenser, the vapors condense and return to flask *E*. If desired, a sand bath may be used to heat the flask.

The combination of the hot vapors and vacuum has dried 2 gm samples of easily oxidized organic compounds, as determined by the usual constant weight procedure. The advantages of this method over that of drying in a vacuum desiccator are quite obvious and need no discussion.

Editorial Note:—This apparatus is carried in stock by laboratory supply houses.

#### P-38—DRYING TIME (GARDNER)

*(Gardner)*

The Gardner Drying Time Recorder (Figure 66) will measure the *set to touch* time, *dry* time, and *dry hard-tack free* time of paints and other materials. A permanent record of the test strip is made, which may be photographed.

PROCEDURE

Coated strips of tin, or glass strips 1″ wide by 28″ (7) are fastened to the traveling table (4) by means of spring clips (8), and are held in place by metal pins protruding through the traveling table. An inscribed line on the table designates the starting point. The table should be placed on the motor shaft (2) so that the shaft pinion, or gear, and the rack (3) attached to the bottom of the table mesh at the point where the inscribed mark is directly over the motor shaft.

The rigid metal gear wheels (5) are then mounted in the floating housing, bearing their weight upon the wet films (7). The motor cord is then plugged into a 110 volt *a.c.* outlet. The traveling table is activated by a shaft

(2) projecting from the motor (1) so that the wet films on the tin or glass strips (7) will travel at the rate of 30 mm per hour. Five mm equals 10 minutes drying time.

[AUTHOR'S NOTE: *The rate of travel can undoubtedly be varied to suit the need.*]

The wheels attached to each end of the table may be adjusted so that one end of the table is slightly higher than the other. This will insure that the rack and pinion (3) mesh properly.

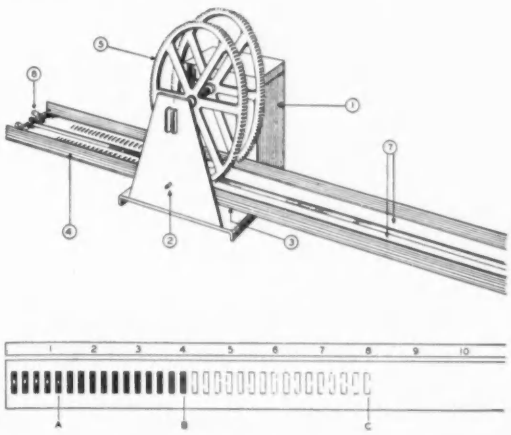



Figure 66. Gardner Drying Time Recorder. Recorder is shown running upon two painted strips. Lower view is of one strip after removal from test

The weight of the rigid revolving gear wheel is such that it impinges through the wet film and picks up the paint upon the emerging cogs, leaving the bright metal surface of the strip quite evident. Prior to the *set to touch* time small droplets will fall back from the gear teeth onto the transverse cog impressions. When these droplets no longer fall the *set to touch* time is indicated by A, Fig. 66. As soon as the traveling cogs no longer remove the paint from the painted strips but merely travel over the surface, thereof and leave surface indentations, the *dry* time is indicated by B, Fig. 66. The point where the film becomes further hardened and the traveling cogs no longer make an impression in the films designates the *dry hard-tack free* time, C, Fig. 66. The dry hard point may best be viewed from a 30° angle. Up to the present time no drying time instrument had been altogether successful in measuring the *dry hard-tack free* point. Further work is now being done with this instrument in order to determine if such measurement can be *accurately* determined.

### Cleaning Instructions

After a test has been run, lift gear wheels from floating housing and rotate them in a pan or dish containing about ½" of solvent on the bottom. If allowed to remain in the solvent for a few minutes after having been rotated, the paint adhering to the gear teeth may be easily wiped off with a clean rag. A small nail brush is supplied for cleaning between the gear teeth when necessary.

### Method of Preparing Strips

Strips of tin, glass or lacquered paper may be coated by hand with an ordinary paint brush. With some skill, fairly uniform films will be obtained. It is preferable, however, that the films be made upon strips of glass which are fastened to the base of a wood angle block. The coating is done with a Film-O-Graph which is a plated steel cylinder with a milled channel cut in each end, through which the coating material flows. In the standard Film-O-Graph, these channels are .001" and .003" in depth. Paint is placed in the cylinder which is then held firmly against the strip to be coated, and drawn or pushed to the other end of the strip. It should be moved smoothly at the rate of about 3 inches per second and not stopped until the end is reached. A wood guide block is used to keep it straight. The thickness of film laid down is about half that of the channel opening used, because of adherence of the coating material to the Film-O-Graph. By this means, films of great uniformity may be obtained. When working with clear varnishes a small amount of oil soluble dye may be added to color the film and give better contrast against the strip. If tin strips are used they should be sand papered and cleaned before applying coatings.

### P-39—EMULSIONS, OIL RATIO IN RAPID METHOD FOR DETERMINING THE OIL RATIO IN WATER SOLUBLE CUTTING OILS

*(R. H. Williams, The Chemist Analyst 32, No. 4, 77, 1943)*

An adaptation of the standard Babcock test for butter fat in dairy products (*1*) provides a rapid method for determining the oil ratio in water soluble cutting oils. The test takes less than 15 minutes.

With a pipette transfer 20 ml of the cutting oil to a standard Babcock test bottle. Add 10 ml of sulfuric acid (sp. gr. 1.84) and shake gently (much heat will be liberated) until the emulsion breaks down. Place the test bottle or bottles in the centrifuge, suitably counter-balance and whirl for 3 minutes. Then fill the bottles with hot water (160-200°F) until the liquid column approaches the top graduation of the scale. (When there is a tendency for the oil to re-emulsify, add hot sulfuric acid (1:3) instead of hot water). Again centrifuge for 3 minutes. The test bottles are now placed in a water bath and maintained at a temperature of 140°F for about 3 minutes. Measure the oil column from its lower surface to the highest point of the upper menicus. Since one scale division on the Babcock test bottle measures 0.2 ml, the oil ratio corresponding to $v$ scale divisions is $1 : (100/v)$.

### P-40 — EMULSIFIABILITY OR THE WATER CAPACITY OF OINTMENT BASES

*(F. Casparis and E. W. Meyer, Pharm. Acta Helv. 10, 163, 1935)*

The experimental procedure used in this study was the incorporation of the maximum amount of water possible in a melted base followed by cooling and removal of the excess water. The amount of water held by the base was then determined by a tetrachlorethane distillation procedure and the separated water measured.

The "water number" of the various ointment bases was then calculated in the following manner:

Weighed amount of saturated base..... = A
Water content ..... = B
Weight of base alone ..... = A — B

$$\text{Water number} = \frac{100\ B}{(A-B)}$$

### P-41—EMULSION PHASE DETERMINATION

*(Van Dyk Co. Method)*

Plug the light cord attachment of the emulsion phase

tester shown in Figure 67 into the electric light circuit. Place a small portion of the emulsion in the space between the two electrodes. Be sure the emulsion touches both electrodes. Now press the test button. If the neon light burns, the emulsion is of the oil-in-water type. If it doesn't burn, the emulsion is of the water-in-oil type. If it glows but slightly, the emulsion is a polyphase type, probably most of the type water-in-oil.

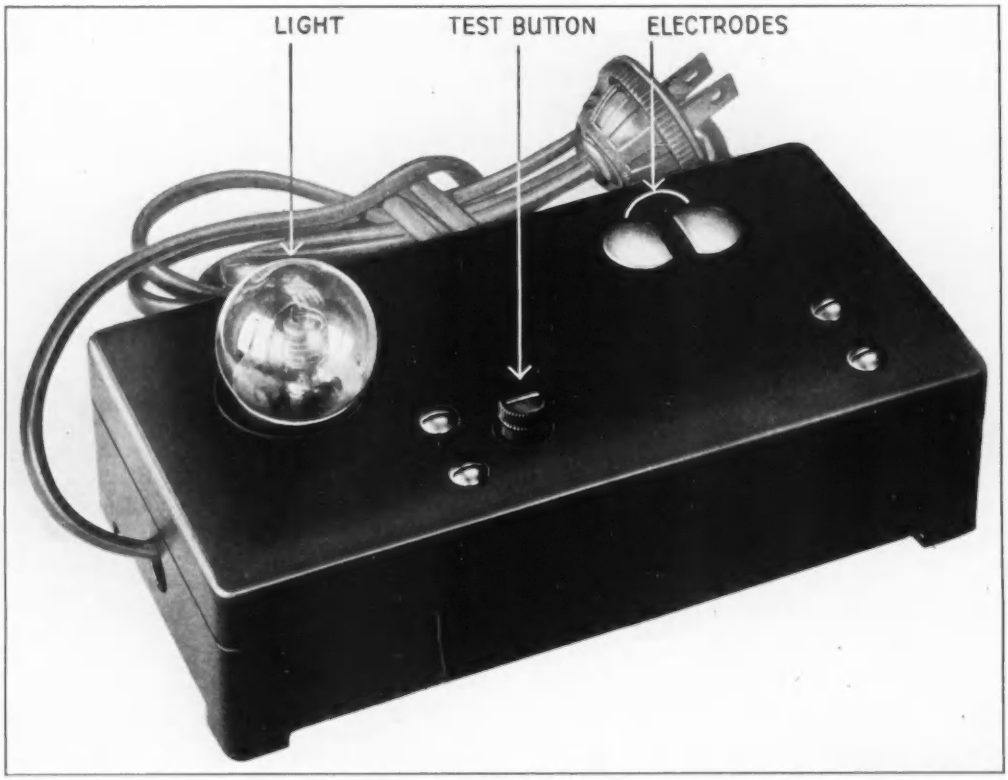



Figure 67. Van Dyke Emulsion Tester

#### P-42—EMULSION PHASE TEST

*(Combining Color and Dilution Method)*

Make a strong solution of Sudan III or FD&C yellow No. 3a No. 4, or other oil soluble dye in mineral or vegetable oil.

To a small amount of the emulsion in question add two or three drops of the Sudan III oil solution. Stir lightly with a stirring rod. If the oil mixes in easily, the emulsion is of the water-in-oil type. If the oil remains as colored droplets, the emulsion is of the oil-in-water type.

Make a 1:1000 solution of methylene blue in EXT. D&C Blue No. 1 in water. Add two or three drops of methylene blue solution to the questionable emulsion. If the colored solution mixes in readily coloring the entire mass uniformly on gentle stirring, the emulsion is of the oil-in-water type. If the droplets of methylene blue solution remain as colored droplets, the emulsion is of the water-in-oil type.

#### P-43—EMULSION STABILITY

Using a centrifuge giving 3600 r.p.m. place 10 cc into a graduated tube, counterbalance and run for periods of from 10-100 minutes. Note the amount of oil separation.

If the unknown emulsion is to be compared to one of known stability, counterbalance it with a like amount of emulsion of known stability and centrifuge at the same time, for the same number of minutes, noting the amount of oil separation upon completion of the test.

The centrifuge method is believed to be one of the more accurate means of determining emulsion stability.

#### P-44—DETERMINING THE MECHANICAL STABILITY OF EMULSIONS: A RAPID QUANTITATIVE METHOD

*(R. C. Merrill, Jr., Ind. & Eng. Chem. Anal. Ed. 15, 743-6, 1943)*

A rapid quantitative method for determining the mechanical stability of emulsions involves measuring the rate of separation of internal phase under a constant centrifugal force. The reciprocal of the initial rate of separation at a constant centrifuge speed has been taken as a quantitative index of the mechanical stability of the emulsion. The method has been applied to both water-in-oil and oil-in-water emulsions stabilized by lecithin, soaps, and vegetable gums. It gives results in a few hours apparently comparable to those obtained by more tedious methods involving other factors and requiring measurements over many months. Definite effects of the age of the emulsion on its mechanical stability as determined by this method have been found in the case of soap and saponin-stabilized emulsions.

(Through Oil & Soap *21*, 64, 1944.)

### P-45 — RAPID METHOD OF DETERMINING STABILITY IN EMULSIONS

*(Bochko, V.-Masloboino Zhirovoe Delo 11, 489, 1935)*
*Thru C. A. 39, 928, 1936*

A glass cylinder 25 mm in diameter with a bulbous extension at the bottom is fitted with a side cock and rests in a wooden support. The cylinder is charged with 100 cc of the emulsion and placed in a drying oven to settle at a definite temperature and for definite time. After 20 cc of the liquid has been removed and discarded, 10 cc is withdrawn into a tared aluminum beaker and weighed before and after evaporating in a drying oven, giving the moisture content. If the emulsion contains $B\%$ of dispersed phase, and "$a$" is the percentage of the dry substances of the phase and "$b$" the weight of the evaporated moisture, then

$$b(100 + a)$$

the content of non-fatty part in the emulsion is $\frac{}{a}$

$$b(100 + a)$$

and the stability of the emulsion is $\frac{}{B}$.

### P-46—EVAPORATION RATE

*(U. S. Industrial Chemicals, Inc., Method)*

Evaporation rates are determined with the apparatus shown below. A light weight Jolly balance spring (5 cm elongation per gram) is suspended from the top of a six inch diameter glass pipe, three feet long, held in vertical

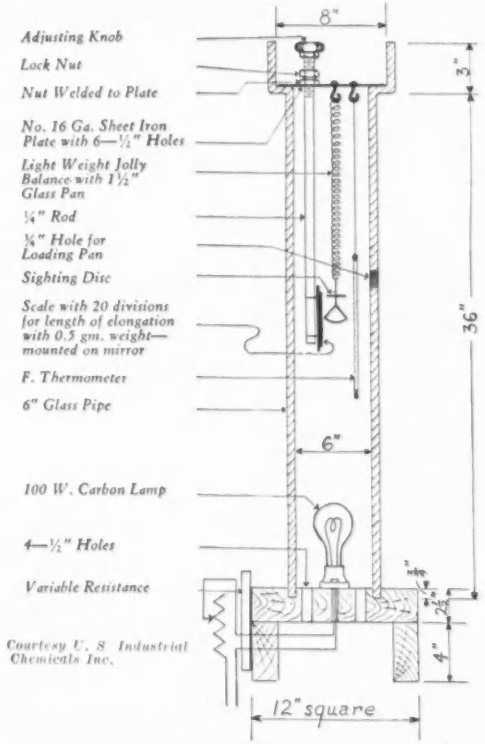



Figure 68. Apparatus for determining evaporation rate (U.S.P.)

position by a stand. The upper end of the glass pipe has an eight inch diameter bell in which is placed an iron plate to support the balance, a thermometer and a scale for the balance. In the base of the stand are four one-half inch holes and above these is placed a 100 watt carbon lamp wired in series with a variable resistance. The top plate has six one-half inch holes to carry off the vapors. About two inches above a one and one-half inch diameter glass Jolly balance pan, a three-quarter inch hole is placed in the glass pipe for loading the balance by use of a fine tip pipette.

The scale is made by measuring the distance that one-half gram lowers the balance pan and dividing this distance into twenty equal divisions.

After the temperature has been regulated, enough sample is placed on this balance pan to lower it the twenty divisions on the scale.

The time in minutes for the pan to rise each division is taken. Thus the evaporation rate of each five per cent is obtained, from which a curve may be plotted.

### P-47—FILL OF CONTAINER FOR COSMETIC POWDERS

*(A.O.A.C. Tentative Method)*

Measurements to be made:

(1) Net weight of the product ($W$ in *ozs.*).

(2) Capacity of the container ($V_{tot}$ in *ml*).

(3) Maximum volume ($V_{max}$ in *ml*): Toss two ozs. of powder back and forth on a sheet of paper 10 times, fill into a 250 ml graduated cylinder, and note volume.

(4) Minimum volume ($V_{min}$ in *ml*): Vigorously pound the cylinder base on the palm of the hand 100 times and read the volume; pound 20 times and again read the volume; repeat until 20 hard poundings reduce the volume less than 1 ml and note the final volume.

CALCULATIONS

$$\text{Fill, } F = \frac{\frac{V_{max} + V_{min}}{2} \times \frac{W}{2}}{V_{tot}}, \text{ or}$$

$$F = \frac{W(V_{max} + V_{min})}{4V_{tot}}$$

If properly manufactured, a 90 to 95% fill will be found under good plant practice.

### P-48—FINENESS OF METAL STEARATE

*(Metasap Method)*

Place 5 grams in a screen (325 mesh for zinc; 200 mesh for other soaps). Wash with alcohol until the washings are no longer milky. Dry and weigh the residue.

$$\frac{\text{Weight of residue}}{\text{Weight of sample}} \times 100 = \text{per cent residue}$$

This is an important property especially if the material is to be used in face powder.

### P-49—FINENESS OF POWDERS

*(U.S.P.)*

The fineness of powders in this Pharmacopoeia is expressed in descriptive terms, each of which is related to the number assigned to a certain standard sieve.

SIEVES FOR PHARMACOPOEIAL TESTING

Sieves for pharmacopoeial testing shall be of wire cloth woven (not twilled) from brass, bronze, or other suitable wire, and shall not be coated or plated. The following

table gives the nominal dimensions, permissible variations, and limits for woven wire cloth of standard sieves.

Nominal Dimensions of Standard Sieves

| MICRONS | NUMBER | SIEVE OPENING MM | PERMISSIBLE VARIATION IN AVERAGE OPENING PER CENT | PERMISSIBLE VARIATION IN MAXIMUM OPENING PER CENT | WIRE DIAMETER, MM |
|---|---|---|---|---|---|
| 9520 | 2 | 9.52 | 3 | 5 | 2.11 to 2.59 |
| 4760 | 4 | 4.76 | 3 | 10 | 1.14 to 1.68 |
| 2000 | 10 | 2.00 | 3 | 10 | 0.68 to 1.00 |
| 840 | 20 | 0.84 | 5 | 15 | 0.38 to 0.55 |
| 590 | 30 | 0.59 | 5 | 15 | 0.29 to 0.42 |
| 420 | 40 | 0.42 | 5 | 25 | 0.23 to 0.33 |
| 297 | 50 | 0.297 | 5 | 25 | 0.170 to 0.253 |
| 250 | 60 | 0.250 | 5 | 25 | 0.149 to 0.220 |
| 210 | 70 | 0.210 | 5 | 25 | 0.130 to 0.187 |
| 177 | 80 | 0.177 | 6 | 40 | 0.114 to 0.154 |
| 149 | 100 | 0.149 | 6 | 40 | 0.096 to 0.125 |
| 125 | 120 | 0.125 | 6 | 40 | 0.079 to 0.103 |
| 74 | 200 | 0.074 | 7 | 60 | 0.045 to 0.061 |

In any sieve, the average opening between the adjacent warp and the adjacent shoot wires, taken separately, shall confirm to the width of opening specified within the specified percentage of permissible variation in the average opening. The maximum width of opening between any adjacent warp or shoot wires shall not exceed the width of opening specified by more than the specified percentage permissible variation in maximum opening. The average diameter of the warp and shoot wires, taken separately, of the cloth in any given sieve, shall be within the range of wire diameters given in the table.

For details regarding the standardization of sieves, reference should be made to *National Bureau of Standards Letter Circular 72, July 26, 1922,* or to *Specification ELL-39 of the American Society for Testing Materials.*

### Fineness of Powdered Vegetable or Animal Drugs

The fineness of vegetable and animal drugs is expressed in this Pharmacopoeia by the following terms: Very coarse powder (No. 8), coarse powder (No. 20), moderately coarse powder (No. 40), fine powder (No. 60), very fine powder (No. 80). A powder to conform with any of these specified terms must meet the following requirements. In the preparation of ground or powdered drugs, no portion of the drug shall be rejected during milling or sifting unless specifically permitted under the official description of the drug. It is permissible, however, to withhold final tailings not exceeding 5 per cent of the drug being powdered, which may be added in no greater percentage to other lots of the same drug in subsequent millings.

#### Standards

A very coarse powder (No. 8) is one in which all particles will pass through a No. 8 standard mesh sieve and not more than 20 per cent through a No. 60 standard mesh sieve.

A coarse powder (No. 20) is one in which all of the particles will pass through a No. 20 standard mesh sieve and not more than 40 per cent through a No. 60 standard mesh sieve.

A moderately coarse powder (No. 40) is one in which all of the particles will pass through a No. 40 standard mesh sieve and not more than 40 per cent through a No. 80 standard mesh sieve.

A fine powder (No. 60) is one in which all of the particles will pass through a No. 60 standard mesh sieve and not more than 40% through a No. 100 standard mesh sieve.

A very fine powder (No. 80) is one in which all of the particles will pass through a No. 80 standard mesh sieve.

### Fineness of Powdered Chemicals

The fineness of chemicals is expressed in this Pharmacopoeia by the following terms: coarse powder (No. 20), moderate coarse powder (No. 40), fine powder (No. 80), very fine powder (No. 120).

#### Standards

A coarse powder (No. 20) is one in which all of the particles will pass through a No. 20 standard mesh sieve, and not more than 60 per cent will pass through a No. 40 standard mesh sieve.

A moderately coarse powder (No. 40) is one in which all of the particles will pass through a No. 40 standard mesh sieve, and not more than 60 per cent will pass through a No. 60 standard mesh sieve.

A fine powder (No. 80) is one in which all of the particles pass through a No. 80 standard mesh sieve.

A very fine powder (No. 120) is one in which all of the particles pass through a No. 120 standard mesh sieve.

### Method for Determining Uniformity of Fineness

For determining uniformity of degree of fineness of powdered drugs, the following process may be used, employing standard testing sieves which meet the requirements set forth above.

For very coarse, coarse and moderately coarse powders, place from 25 to 100 gm of the powder to be tested upon the proper standard testing sieve with a tightly fitting receiving pan and cover. Shake the sieve in a rotary horizontal direction and vertically by tapping on a hard surface for not less than 20 minutes or until no appreciable number of particles pass through the sieve. Weigh accurately the amount remaining on the sieve and in the receiving pan and calculate to per cent.

In the case of fine or very fine powders, proceed as for coarse or for moderately coarse powders, but shake the sieve for at least 30 minutes or until no appreciable number of particles pass through the sieve.

In the case of oily or other powders which tend to clog the openings, the screen should be carefully brushed at intervals during the test. In the case of powders which tend to form lumps such lumps should be carefully disintegrated during the sifting test. Do not increase the fineness of the powder during the sieve testing.

Mechanical Sieve Shaker—The fineness of a powdered drug or chemical may also be determined by screening through standard sieves in a mechanical sieve shaker. The purpose of the sieve shaker is to reproduce the circular and tapping motion given to testing sieves in hand sieving but with a uniform mechanical action. A sieve or a nest of sieves rests upon a horizontal solid metal base plate which is attached to a bar one end of which is revolving in a circle 1.125 inches in diameter, the other traveling linearly to and from the center of rotation of the first, the bar measuring 14.75 inches between centers. The frequency of oscillation of the sieves is 285 3 cycles per minute. At the top of the stack of sieves is placed a solid metal cover plate bearing a cork insert which projects 1 inch above the top surface of the cover plate. The cork insert is tapped at the top with a hammer striking a blow

of 2.5 pounds, falling through a distance of 1.0625 inches at a rate of 150 times per minute. The cork insert must be replaced when necessary to retain the distance of the blow. The sieves are to be placed upon the sieve supporting plate, and the lower carrying plate so adjusted that it is just possible to make a complete turn of the cover plate with the unaided fingers.

### P-50—SCREEN TEST FOR FINE POWDERS

*(T.G.A. Method No. 7)*

#### Apparatus Required

*Sieves:*—Sieves which are designed and designated in accordance with National Bureau of Standards Specifications should be used for sieve test although it is not necessary to use standardized sieves unless there is disagreement with the vendor. By the term standardized sieves is meant sieves that have been tested and certified by the National Bureau of Standards.

#### Procedure

1. A separate 10 gram sample should be used for each sieve required.
2. Accurately weigh the sample and transfer to the required sieve.
3. Wash the sample through the sieve by directing a slow stream of tap water upon it. See Note (a). Tapping may be necessary to start the water through the sieve. Continue washing the sample until the washings are free of that portion of the sample which is fine enough to pass through the sieve. See Note (b).

For materials that are not wet by water and that are insoluble in alcohol, such as Zinc Stearate and Toluidine Toner, a stream of alcohol from a wash bottle may be used to wash the sample through the sieve. After the material has been well wetted with alcohol it is often possible to finish the determination using tap water. By proceeding in this manner much alcohol can be saved. It is not always possible, however, to revert to the use of water to finish the determination; particularly is this true of Zinc Stearate which must be washed with alcohol exclusively.

4. Dry the sieves containing the residues on a steam bath and finally in an oven at 105° C. When dry carefully brush the residue on a tared watch glass and accurately weigh.

Calculations

$$\frac{\left.\begin{array}{c}\text{Wt. of Residue on Each}\\ \text{Sieve Separately}\\ \text{(Step 4)}\end{array}\right\} \times 100}{\text{Weight of Sample (Step 2)}} = \begin{array}{l}\text{\% Residue on the}\\ \text{U.S. No. Sieve}\end{array}$$

#### Notes

(a) Tap water is usually sufficiently free of suspended particles to be utilized directly as it comes from the faucet. If the water is turbid, due to flood or other conditions, it is necessary to place a large bottle of distilled water above the working sink and to siphon the water through a clean rubber tube to the level of the sieve.

It is a good plan to insert a small rubber stopper carrying a short glass tube, about 2 inches in length and ¼ inch in internal diameter, in the faucet outlet. A thin flexible piece of clean rubber tubing (new tubing should first be thoroughly washed) about 2 feet in length is then attached to the glass tube. The faucet is turned on very slowly until a thin stream of water is coming through the rubber tube. By pressing the end of the rubber tube between the fingers the stream of water can be varied in intensity and directed to any section of the sieve. Experience has shown that the best practice is alternately to tip the sieve from one side to another, washing the sample from the higher level of the sieve to the lower and then reversing the sieve and repeating the operation.

(b) In order to obtain comparable results it is essential to continue washing the residue on the sieve until one is satisfied that all the material fine enough to pass through the sieve has been removed. At least one-half hour of washing is essential in most cases. It is a good plan to catch the last washes in a beaker. By viewing the contents of the beaker against a dark or light colored background, depending upon the color of the sample, it is possible accurately to gauge the progress of the washing operation. Catching the last washings in a large porcelain dish is an excellent plan when the sample is highly colored as in the case of pigments.

### P-51—FLOW TEST

*(A.O.C.S.)*

*Apparatus.* Oil sample bottle, 4-ounce (115-cc) [cut off to a height of approximately 5 inches (11 cm)].

Thermometer graduated in single degree Fahrenheit which can be read without removal from bottle.

Holder as shown in Figure 69.

Iron or glass rods.

*Determination.* Melt the sample to a clear oil and place 30 cc in the sample bottle. Place the bottle containing the oil in a freezing mixture of finely cracked ice and salt (15 per cent salt) for 2 hours. At the end of this time, remove the bottle from the bath, place in the holder, and break up the solid fat, first with an iron or glass rod and finally with the thermometer. Stir and manipulate with the thermometer in a room or air bath maintained at a temperature of 10° to 15° F (5° to 8° C) above the expected flow point until the sample will flow from one end of the bottle to the other when the bottle is inverted. The

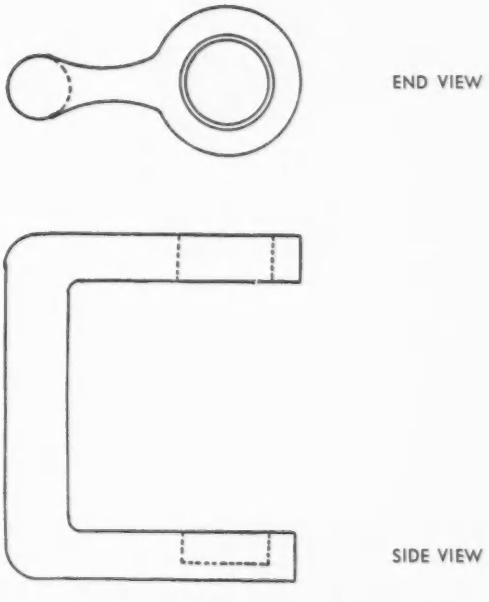



Figure 69. F. A. C. Flow Test Bottle Holder

method gives results within ±1.5° F (0.8° C) in the hands of different operators.

The time and temperature of chilling and the temperature of the room during softening appear to be the important factors in this determination, and care should be taken that the flow test is made immediately at the expiration of the 2 hours chilling period under the definite conditions as laid down. All the final manipulations of the bottle should be made with the holder and not with the bare hand, in order to avoid the effect of the heat of the hand on the determination.

The flow test adopted by the Committee is a combination of well-known methods based on the so-called *Navy flow test.* It applies to neat's-foot oil, lard oil, grease oil, and similar products, but is not applicable to lard compound and the harder fats and fatty mixtures.

### P-52—FLOW TIME TEST

*(B. Fantus & H. A. Dyniewicz, J. Ana. Pharm. Assoc. 28, 299, 1939)*

To overcome the property of anomalous or variable viscosities of colloidal gels, such as of tragacanth, the test is elaborate and is easily performed. The underlying principle is the measurement of the flow time, that is, the time elapsing until the jelly has come to rest at a certain

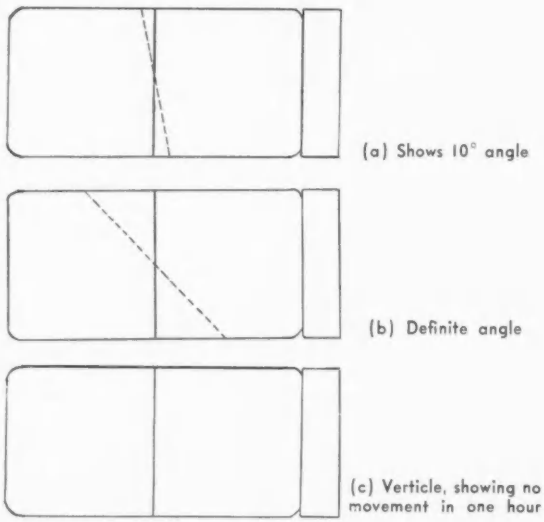



Figure 70. Fantus Flow Test Set-up

level, and measuring the angle this level assumes with the vertical and the length of time it takes to assume this level.

*Flow Time Test:* Use a 4 oz., square cornered bottle with screw cap, marked to show 60 cc of contents. Fill the bottle to this point with the jelly under test, allow to attain a specified temperature, such as room temperature. Then lay the bottle on its side, starting off a stop watch at the same time. The test is then repeated a sufficient number of times to get a good average and is reported as so many seconds flow time at a certain temperature. Thus, a 1% jelly of tragacanth showed a reading of one second while a 2½% jelly of the same tragacanth showed a reading of ten minutes. Figure 70 shows the manner in which the test is performed.

Three types of flow time are recognized, the *horizontal,* making a 9° excursion, the *angle* and the *vertical.* Angle jellies are read as assuming a certain angle within the bottle after one hour. The vertical jelly is one that does not move at all within a period of one hour.

### P-53—AN APPARATUS FOR COMPARISON OF FOAMING PROPERTIES OF SOAPS AND DETERGENTS

*(John Ross & Gilbert D. Miles, Oil & Soap, 18, 99, 1941)*

The apparatus shown in sketch is made to standard dimensions from stock glass. The reservoir or pipette *A* in Figure 71 is filled with the solution to be examined and then placed on the supporting ring at the head of

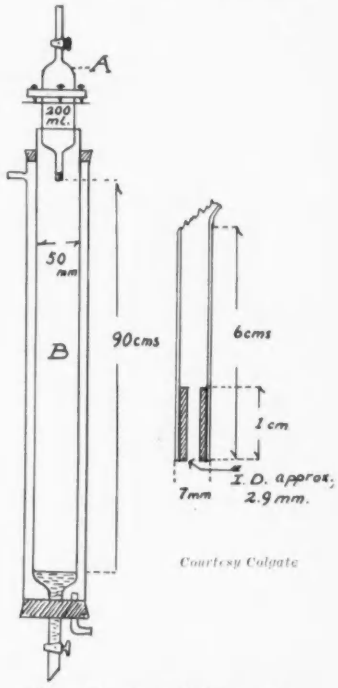



Figure 71. Foam Test Apparatus

the receiver *B* which contains 50 ml of the same solution. The stopcock or reservoir *A* is opened and as the solution falls, foam is formed in the receiver and is measured in *B* immediately after the reservoir *A* is emptied. The orifice of *A* is so constructed that the turbulence set up causes the stream of solution to break up into droplets just after emerging from the orifice. Foam is produced when these droplets strike the surface of the liquid or foam in the receiver.

As regards reproducibility, it has been found that in cases of solutions of most synthetic detergents where no great variation with age occurs, the maximum difference between results will be of the order of 6 mm and the average deviation from the mean will be 2 mm where the foam height is of the order of 200 mm. When applied to built soaps in hard water the spread is of the order of 22 mm and the average deviation from the mean will be 4 mm. This is probably due to the difficulty of reproducing and aging of such solutions, because it is found that repeated runs on the same solution are in closer agreement than repeated tests on solutions prepared in "parallel" manner. Even with variations of this order the test is still an excellent method for evaluating soaps, soap builders and the like. *(Chapter IV continues in subsequent issue.)*



(Copyright 1944 American Perfumer & Essential Oil Review)